

SMC guide to ATEX compliant products





ATEX Directive

Directive 94/9/EC

Equipment and Protective Systems intended for use in potentially Explosive Atmospheres

Outline of ATEX directive

Since 1st July 2003, equipment used in potentially explosive atmospheres within the EU is required to comply with the ATEX directive.

CE Marking and ATEX

All equipment within the scope of the Directive must bear the CE marking and comply with the directive's requirements. ATEX Directive incorporates conventional European standards for explosion-proof equipment.

Objective of the ATEX Directive

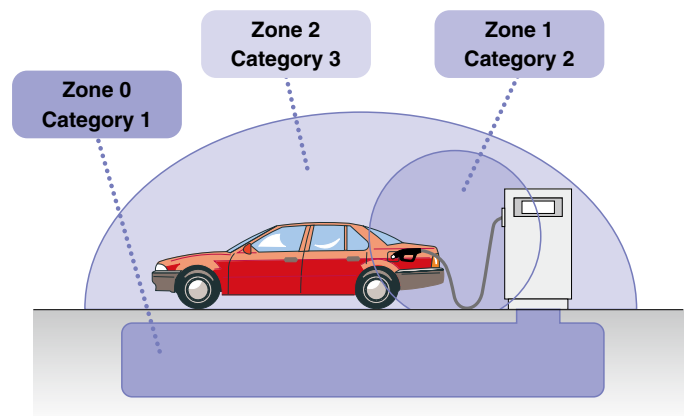
Major objective of the ATEX Directive is as follows:

- Preventing electrostatic discharge
- Preventing ignition likely to be caused by electrical sparks generated from friction, shock, and wear
- Preventing ignition under the influence of elevated temperatures due to friction, shock, and wear
- Concentrating on the duties of the manufacturers
- Certifying equipment to the ATEX directive by Zone/Category

Zone/Category classification

The ATEX directive defines the categories of equipment and protective systems, which can be used in the corresponding zones as per the following table:

Zone	Equipment category	Presence of the explosive atmosphere
0	1	Continuously or for long periods >1000 hours/year
1	2	Occasionally 10 to 1000 hours/year
2	3	Rarely or for short periods <10 hours/year



SMC's Support

SMC's products corresponding to ATEX Directive

SMC's products which are within the scope of the ATEX Directive include electrical equipment and mechanical equipment such as pneumatic actuators (cylinders). SMC prepares pneumatic equipment for all industries compliant with the ATEX Directive to help our customers make a system corresponding to the Directive.

Certification Procedure

Our products are categorized as electrical and non-electrical products, and tested and certified as follows:

Electrical products (Solenoid valve, auto switch, serial transmission system, electro-pneumatic positioner, etc.)			Non-electrical products (Cylinder, rotary actuator, etc.)	
ATEX Category	Certification method	Certified by	Certification method	Certified by
Category 1	1. Technical file 2. Quality audit 3. Type approval test	Certification authority Certification authority Certification authority	1. Technical file 2. Quality audit 3. Type approval test	Certification authority Certification authority Certification authority
Category 2	1. Technical file 2. Quality audit 3. Type approval test	Certification authority Certification authority Certification authority	1. Technical file (to be stored in the certification authority) 2. Quality: In-house manufacturing control	SMC SMC
Category 3	1. Technical file 2. In-house production control	SMC SMC	1. Technical file 2. In-house production control	SMC SMC

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<Note for ordering ATEX compliant products>

Some items may not be compliant with the ATEX Directive. For details, refer to How to Order.

For Self Declaration of Conformity, refer to our sales representative.

List of ATEX compliant products

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■ Air Cylinder		Air Cylinder: 55-C76			33
		ISO Cylinder: 55-C85			40
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		Pneumatic-Pneumatic Positioner: 56-IP5000/5100			107
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ATEX Compliant

5 Port Solenoid Valve

Series 52-SY



CE 0344



II 2G Ex ia IIC T4...T5 Gb Ta-10°C to 50°C
II 2G Ex ia IIC T6 Gb Ta-10°C to 45°C

How to order

52 - SY 5 1 2 0 **L 3** **- 01 F**

ATEX category 2

Series

5	52-SY5000
7	52-SY7000
9	52-SY9000

Type of actuation

1	2-position single
2	2-position double
3	3-position closed centre
4	3-position exhaust centre
5	3-position pressure centre

Piping type

2	Body ported type
4	Base mounted type

Pilot type

Nil	Internal pilot
R (Note)	External pilot

Note) Base mounted type only.

Barrier

Nil	Without barrier
A	Z728.H
F	KFD0-SD2-Ex1.1065

Note) One barrier per solenoid supplied.
Additionally, when the barrier is selected, the barriers equivalent to the number of solenoids are included with the product.

Electrical entry

L	Plug connector type
LL	Plug connector with cover type
TT	Cable type

Note) TT-type is connected to the terminal block.
Cables other than the connected one cannot be used.

Lead wire length

3	300 mm
6	600 mm
10	1000 mm
15	1500 mm
20	2000 mm
30	3000 mm
100	10000 mm (Semi-standard)

* L type has 300 mm and 600 mm only.

Bracket

Nil	Without bracket
F1	With foot bracket (Note 1)
F2	With side bracket

Note 1) 2 position single solenoid valve only.
Note 2) 52-SY9000 has no bracket.

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

A, B port size (Body ported type)

Symbol	Port size	Applicable series
01	1/8	52-SY5000
C4	One-touch fitting for ø4	
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
N3	One-touch fitting for ø5/32"	
N7	One-touch fitting for ø1/4"	52-SY7000
N9	One-touch fitting for ø5/16"	
02	1/4	
C8	One-touch fitting for ø8	52-SY9000
C10	One-touch fitting for ø10	
N9	One-touch fitting for ø5/16"	
N11	One-touch fitting for ø3/8"	
02	1/4	52-SY9000
03	3/8	
C8	One-touch fitting for ø8	
C10	One-touch fitting for ø10	
C12	One-touch fitting for ø12	
N9	One-touch fitting for ø5/16"	52-SY9000
N11	One-touch fitting for ø3/8"	

Port size (Base mounted type)

Symbol	Port size	Applicable series
Nil	Without sub-plate	
02	1/4	52-SY5000
02	1/4	52-SY7000
03	3/8	52-SY9000
03	3/8	
04	1/2	

Manual override

Nil	Non-locking push type
D	Push-turn locking slotted type
E	Push-turn locking lever type

Specifications

Series			52-SY5000	52-SY7000	52-SY9000
Ambient and fluid temperature	Temperature class T6		-10 to 45°C (No freezing)		
	Temperature class T4, T5		-10 to 50°C (No freezing)		
Coil temperature rise			40°C less (at rated)		
Barrier input voltage (non hazardous area)			24 VDC (system rated voltage) at 1.1 W		
Coil rated voltage (hazardous area)			12 VDC at 0.52 W		
Intrinsically safe			ia		
Gas group			IIC		
Protection rating	L type	Plug connector type	IP30 (LL type : IP40)		
	TT type	Cable type	IP65		

Note) Impact resistance: No malfunction resulted from the impact test using a drop impact tester. The test was performed one time each in the axial and right angle directions of the main valve and armature, in both energized and de-energized states (Valve in the initial stage).

Vibration resistance: No malfunction occurred in a one-sweep test between 8.3 and 2000Hz. The test was performed for both energized and de-energized states in the axial and right angle directions of the main valve and armature (valve in the initial stage).

Standard SY manifolds Types 20, 41, 42 are used for 52-SY valves.

Manifold Specifications for 20 Type

Model	SS5Y5-20	SS5Y7-20
Applicable valve	52-SY5□20	52-SY7□20
Manifold style	Single base / B mounting	
1 (SUP) / 3/5 (EXH)	Common SUP / Common EXH	
Valve stations	2 to 20 ⁽¹⁾	
4/2 (A/B) Location	Valve	
Port size	1,3,5 (P,EA,EB) Port	1/4
	4,2 (A,B) Port	1/8 C4 (One-touch fitting for ø4) C6 (One-touch fitting for ø6) C8 (One-touch fitting for ø8) 1/4 C8 (One-touch fitting for ø8) C10 (One-touch fitting for ø10)
Manifold base weight W (g) n: Station	W = 36n + 6	W = 43n + 64

Note 1) For more than 10 stations (more than 5 stations in case of SS5Y7), supply pressure to P port on both sides and exhaust from EA/EB port on both side.

Note 2) 52-SY9□20 valve are not available with manifold as standard.

Manifold Specifications for 41 and 42 Type

Model	SS5Y5-41	SS5Y5-42	SS5Y7-42
Applicable valve	52-SY5□40		52-SY7□40
Manifold style	Single base / B mounting		
1 (SUP) / 3/5 (EXH)	Common SUP / Common EXH		
Valve stations	2 to 20 ⁽¹⁾		
4/2 (A/B) Porting spec.	Location	Base	
	Direction	Side	
Port size	1,3,5 (P,EA,EB) Port	1/4	
	4,2 (A,B) Port	1/8 C6 (One-touch fitting for ø6) C8 (One-touch fitting for ø8) 1/4 C6 (One-touch fitting for ø6) C8 (One-touch fitting for ø8) 1/4 C10 (One-touch fitting for ø10)	
Manifold base weight W (g) n: Station	W = 61n + 101	W = 79n + 127	W = 100n + 151

Note 1) For more than 10 stations (more than 5 stations in case of SS5Y7), supply pressure to P port on both sides and exhaust from EA/EB port on both side.

Note 2) 52-SY9□40 valve are not available with manifold as standard.

Note 3) 52-SY series are not available with resin type manifold (45 type).

⚠ Safety Instructions

- 1) This product is not suitable for Zone 0. The suitable zones are Zones 1 and 2.
- 2) SMC-TAS and TAV Series, antistatic tubing, are available if required.
- 3) The solenoid valve has polarity. Confirm the correct polarity by observing the color of the lead wires. If the polarity is reversed, the barrier may be damaged.
- 4) Confirm that the solenoid input voltage at the lead wires is 10.8 VDC (min).
- 5) This product must be connected to an appropriate barrier (ATEX compliant product), or a certified intrinsically safe circuit, with the following maximum values.
 $U_i = 28 \text{ V}$
 $I_i = 225 \text{ mA}$ (resistively limited)
 $P_i = 1 \text{ W}$
 $C_i = 0 \text{ nF}$
 $L_i = 0 \text{ mH}$

Response time

Type of actuation	Response time (ms) (0.5 MPa)		
	52-SY5000	52-SY7000	52-SY9000
2-position single	26 or less	38 or less	50 or less
2-position double	22 or less	30 or less	50 or less
3-position	38 or less	56 or less	70 or less

- Note 1) According to dynamic performance test JIS B8375-1981.
 Note 2) Response time when barriers were combined with a valve.
 System A: Valve + Z728.H
 F: Valve + KFD0-SD2-Ex1.1065

Manifold Specifications for 20 Type

Model	Port size		Flow characteristics					
	1,5,3 (P,EA,EB)	4,2 (A,B)	1 → 4/2 (P → A/B)		4/2 → 5/3 (A/B → EA/EB)			
			$c[dm^3/(s \cdot bar)]$	b	Cv	$c[dm^3/(s \cdot bar)]$	b	Cv
SS5Y5-20	1/4	C8	1.9	0.28	0.48	2.2	0.20	0.53
SS5Y7-20	1/4	C10	3.6	0.31	0.93	3.6	0.27	0.88

Note) Values for 5 stations manifold with a 2 position single type valve.

Manifold Specifications for 41 and 42 Type

Model	Port size		Flow characteristics					
	1,5,3 (P,EA,EB)	4,2 (A,B)	1 → 4/2 (P → A/B)		4/2 → 5/3 (A/B → EA/EB)			
			$c[dm^3/(s \cdot bar)]$	b	Cv	$c[dm^3/(s \cdot bar)]$	b	Cv
SS5Y5-41	1/4	C8	1.8	0.23	0.44	1.9	0.16	0.45
SS5Y5-42	1/4	C8	1.9	0.20	0.46	1.9	0.12	0.43
SS5Y7-42	1/4	C10	3.0	0.25	0.75	3.0	0.12	0.66

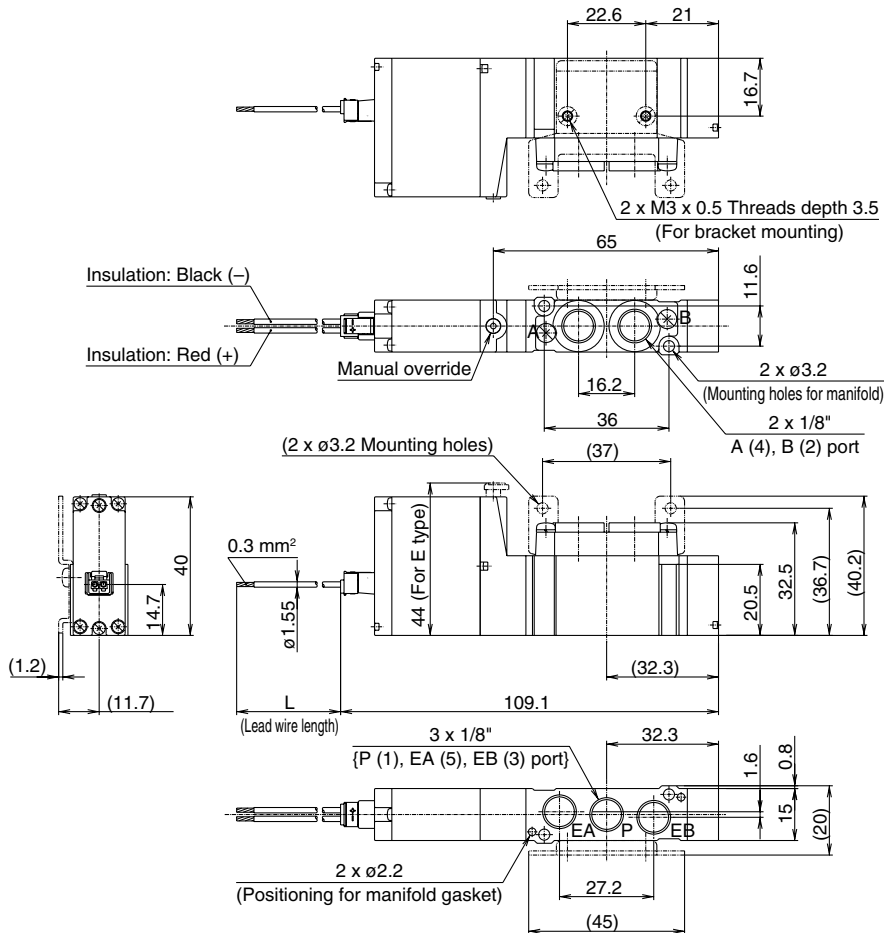
Note) Values for 5 stations manifold with a 2 position single type valve.

Dimensions

2-position single

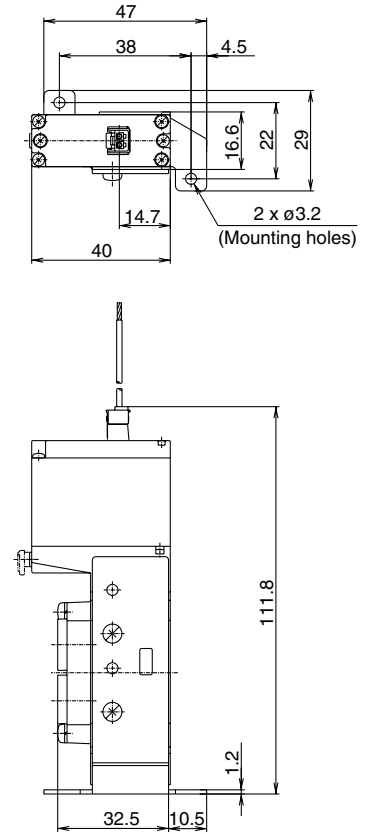
L plug connector (L)

52-SY5120-L□□-01□ (-F2)



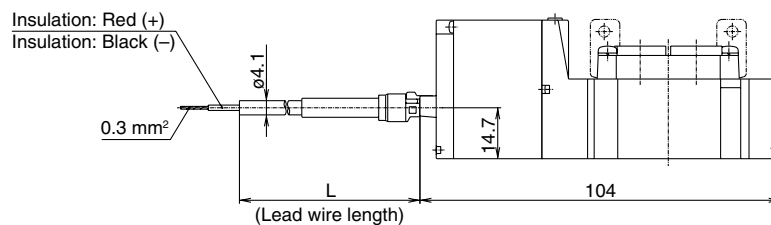
In case with foot bracket

52-SY5120-L□□-01□-F1



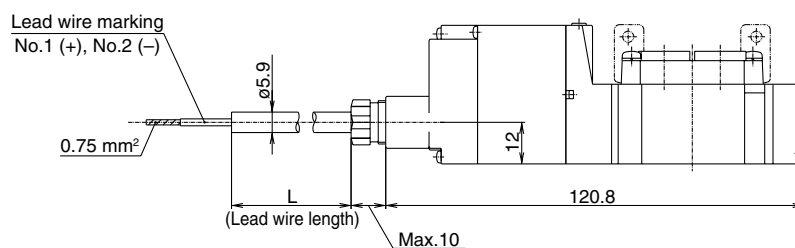
L plug connector with cover (LL)

52-SY5120-LL□□-01□ (-F2)



Cable type (TT)

52-SY5120-TT□□-01□ (-F2)

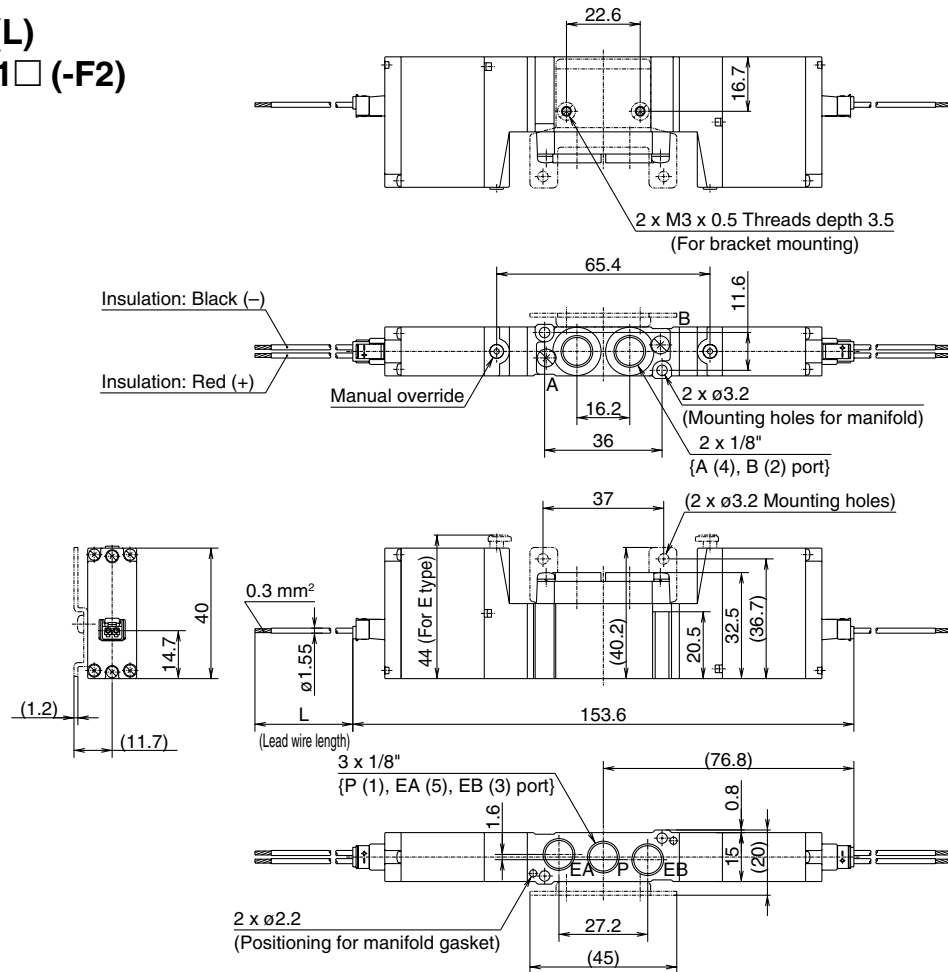


Dimensions

2-position double

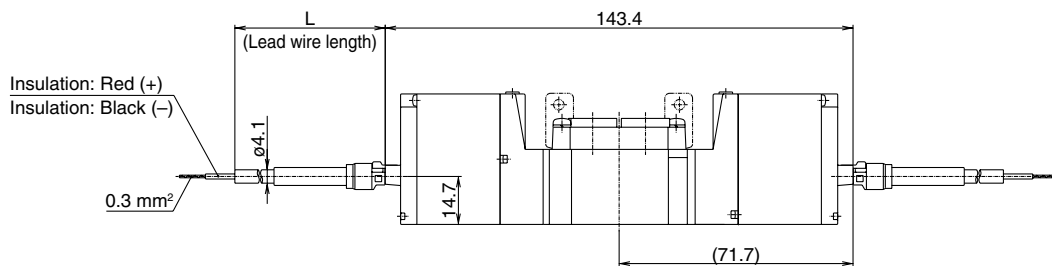
L plug connector (L)

52-SY5220-L□□-01□ (-F2)



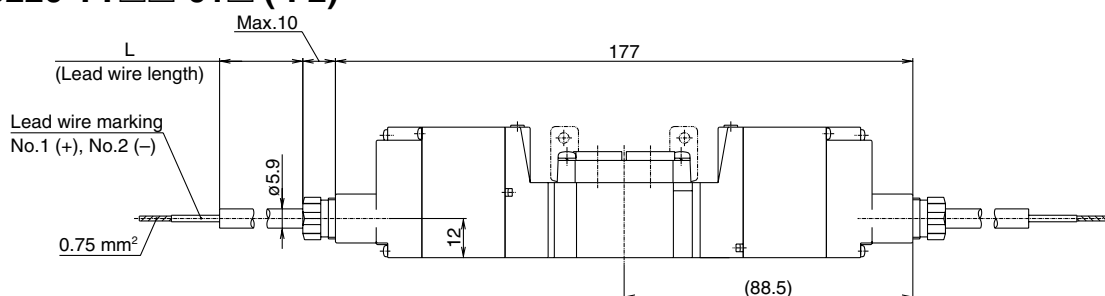
L plug connector with cover (LL)

52-SY5220-LL□□-01□ (-F2)



Cable type (TT)

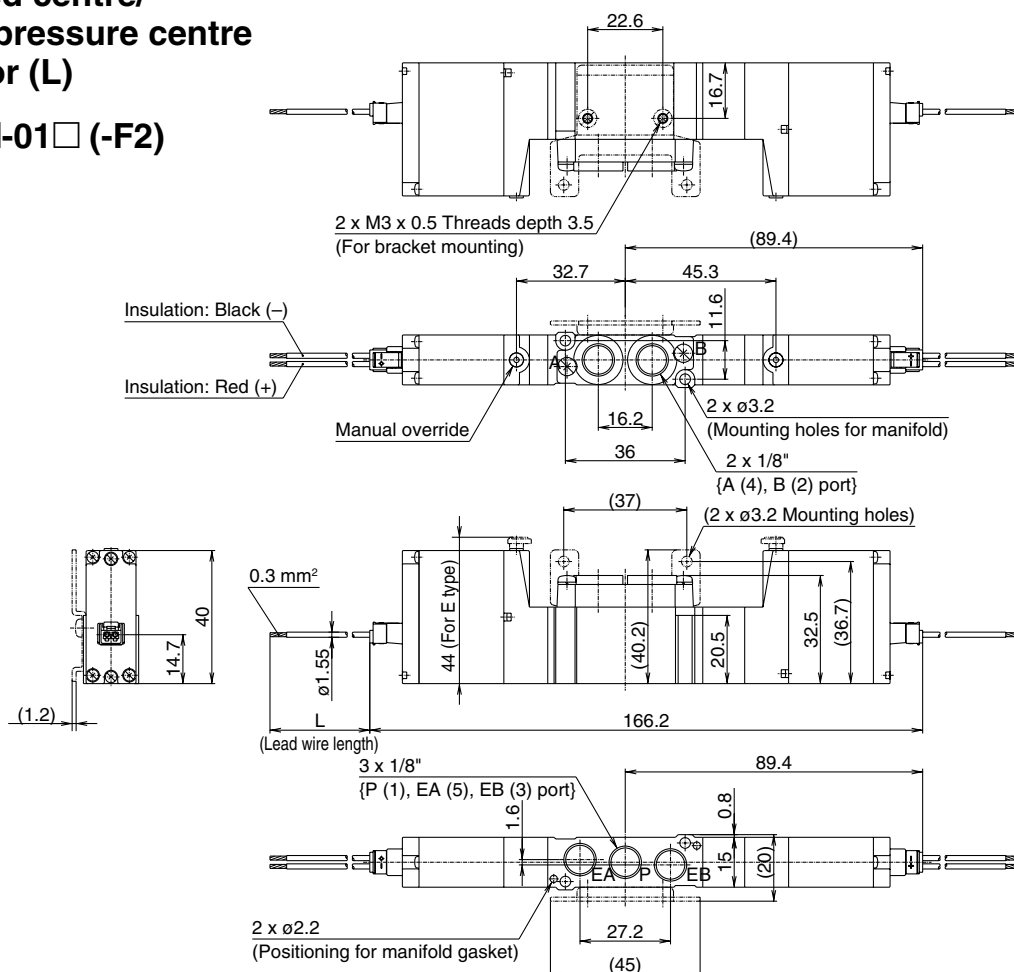
52-SY5220-TT□□-01□ (-F2)



Dimensions

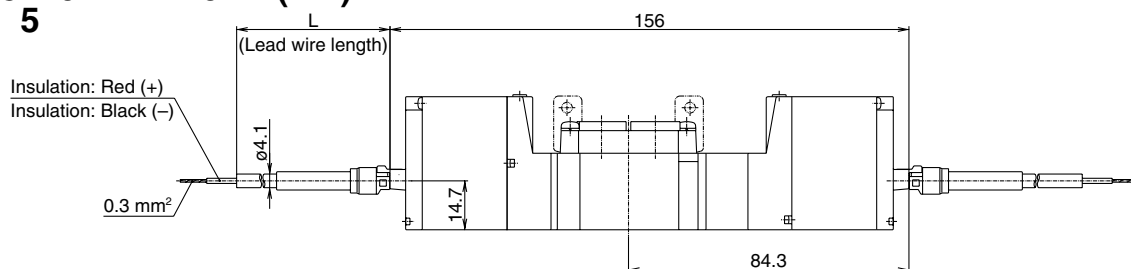
3-position closed centre/ exhaust centre/pressure centre L plug connector (L)

3
52-SY5420-L□□-01□ (-F2)
5



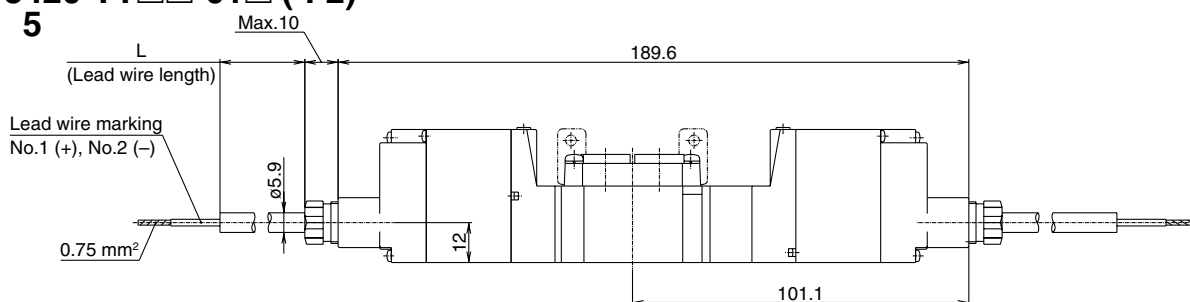
L plug connector with cover (LL)

3
52-SY5420-LL□□-01□ (-F2)
5



Cable type (TT)

3
52-SY5420-TT□□-01□ (-F2)
5



Dimensions

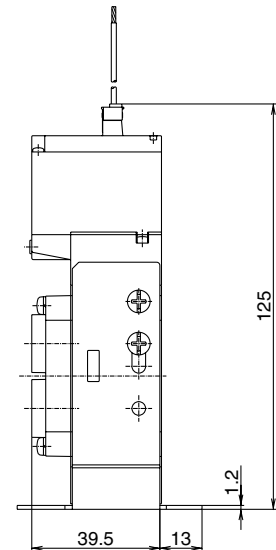
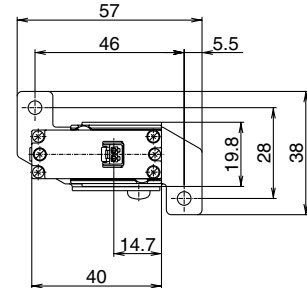
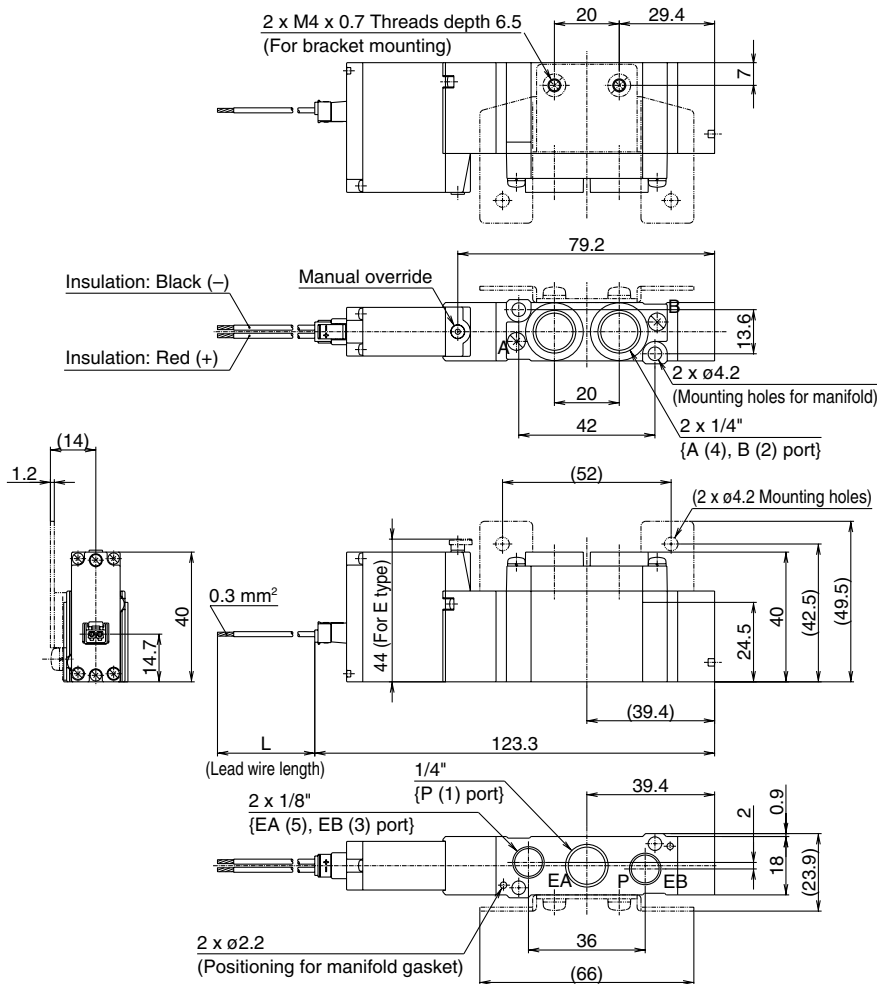
2-position single

L plug connector (L)

52-SY7120-L□□-02□ (-F2)

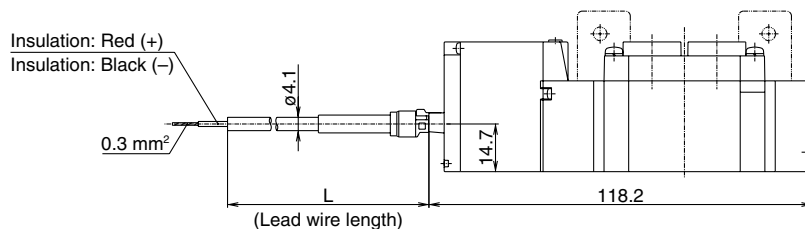
In case with foot bracket

52-SY7120-L□□-02□-(F1)



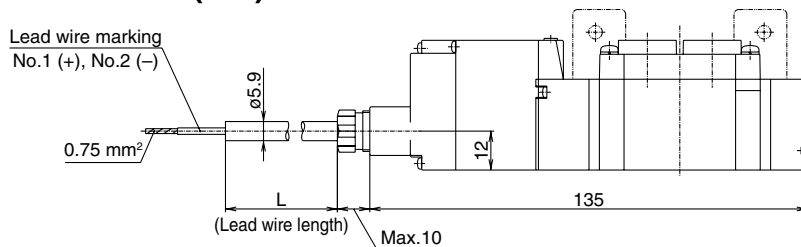
L plug connector with cover (LL)

52-SY7120-LL□□-02□ (-F2)

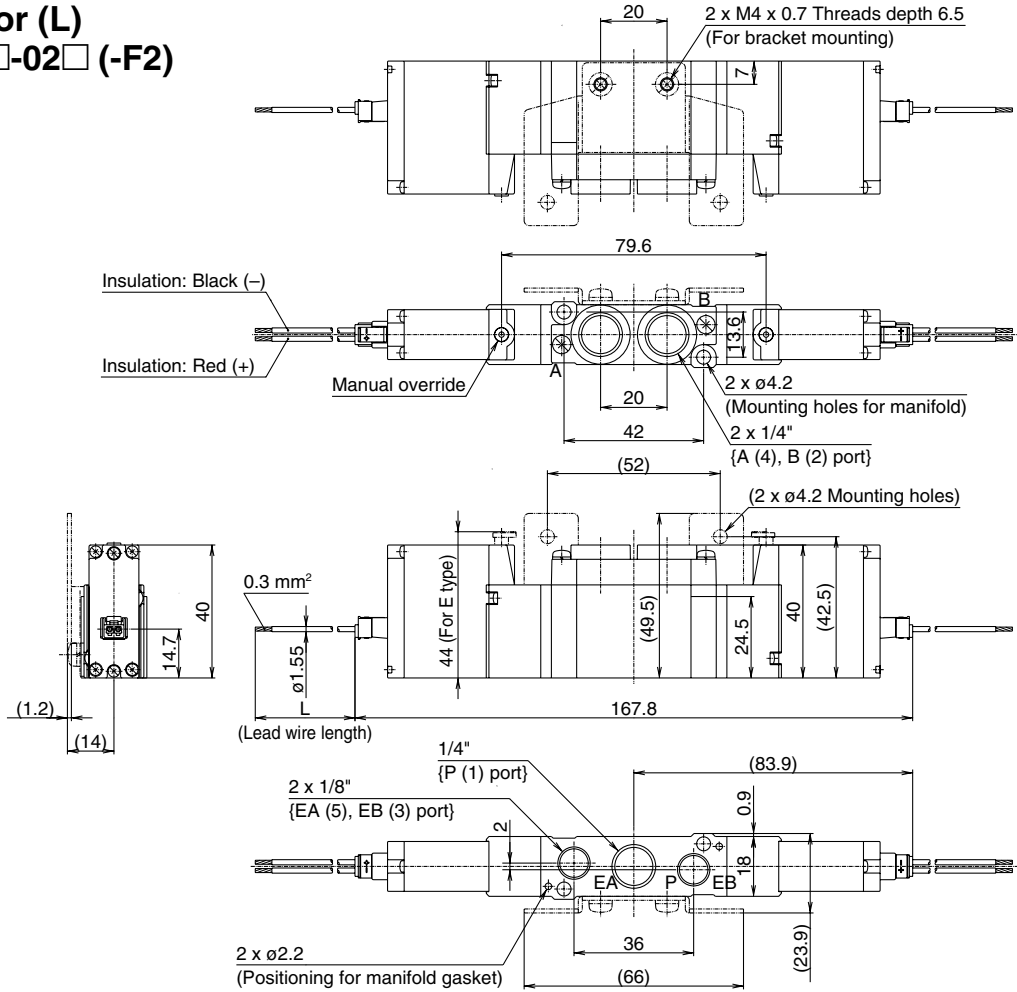


Cable type (TT)

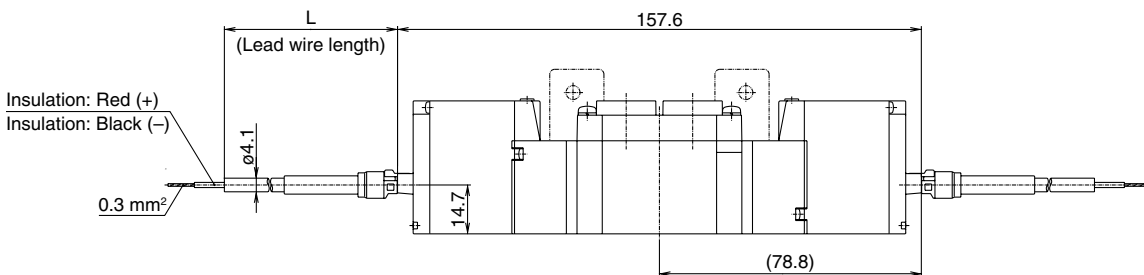
52-SY7120-TT□□-02□ (-F2)



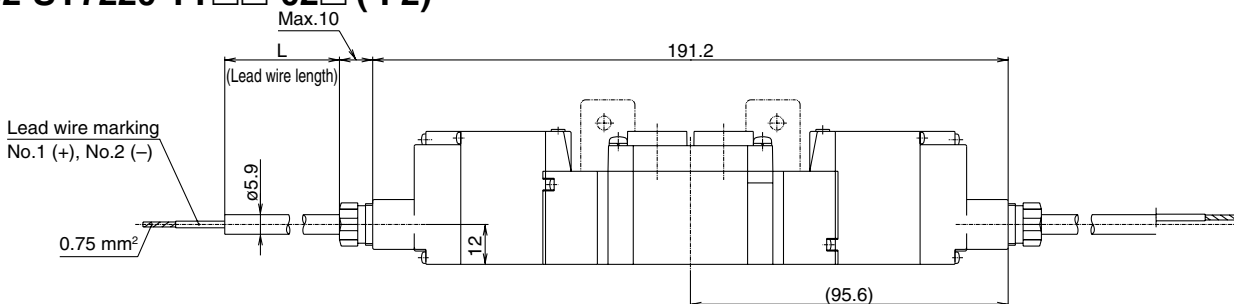
**2-position double
L plug connector (L)
52-SY7220-L□□-02□ (-F2)**



L plug connector with cover (LL)
52-SY7220-LL□□-02□ (-F2)



Cable type (TT)
52-SY7220-TT□□-02□ (-F2)

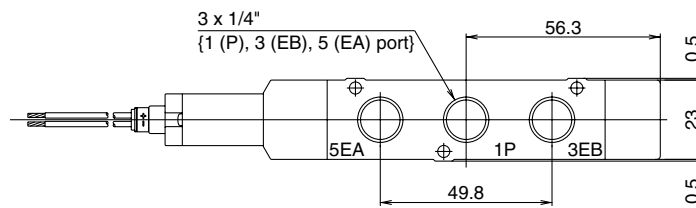
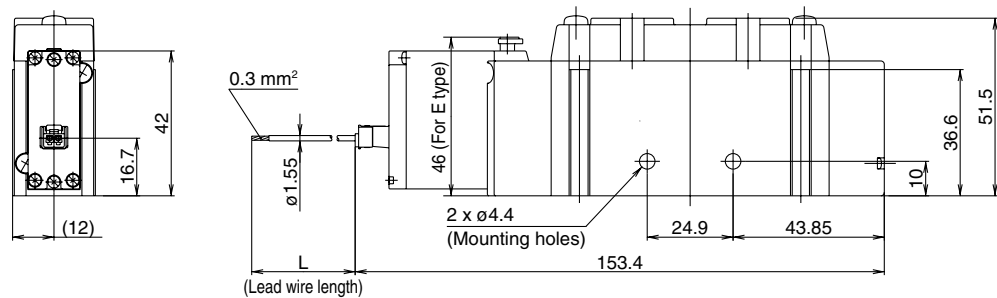
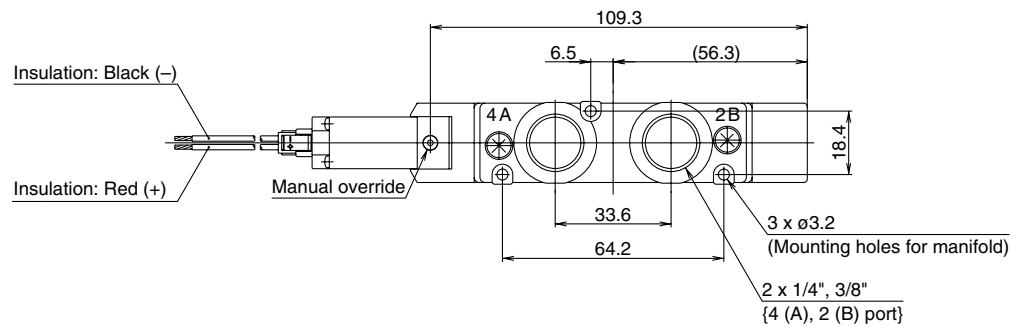


Dimensions

2-position single

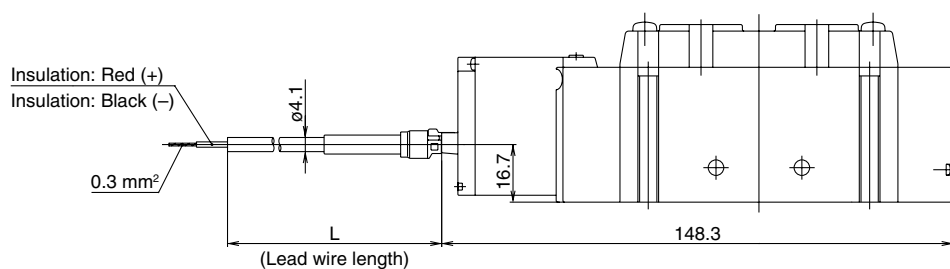
L plug connector (L)

52-SY9120-L□□-⁰²₀₃□



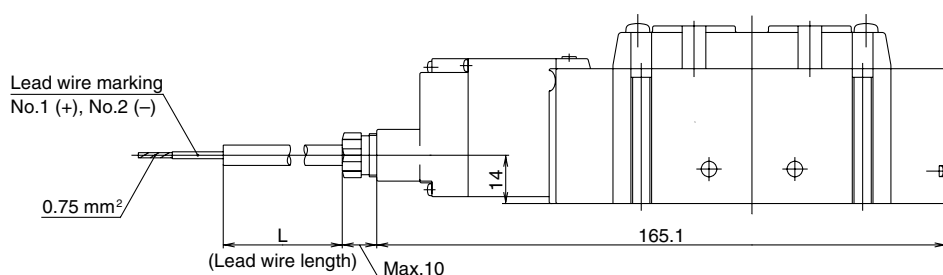
L plug connector with cover (LL)

52-SY9120-LL□□-⁰²₀₃□



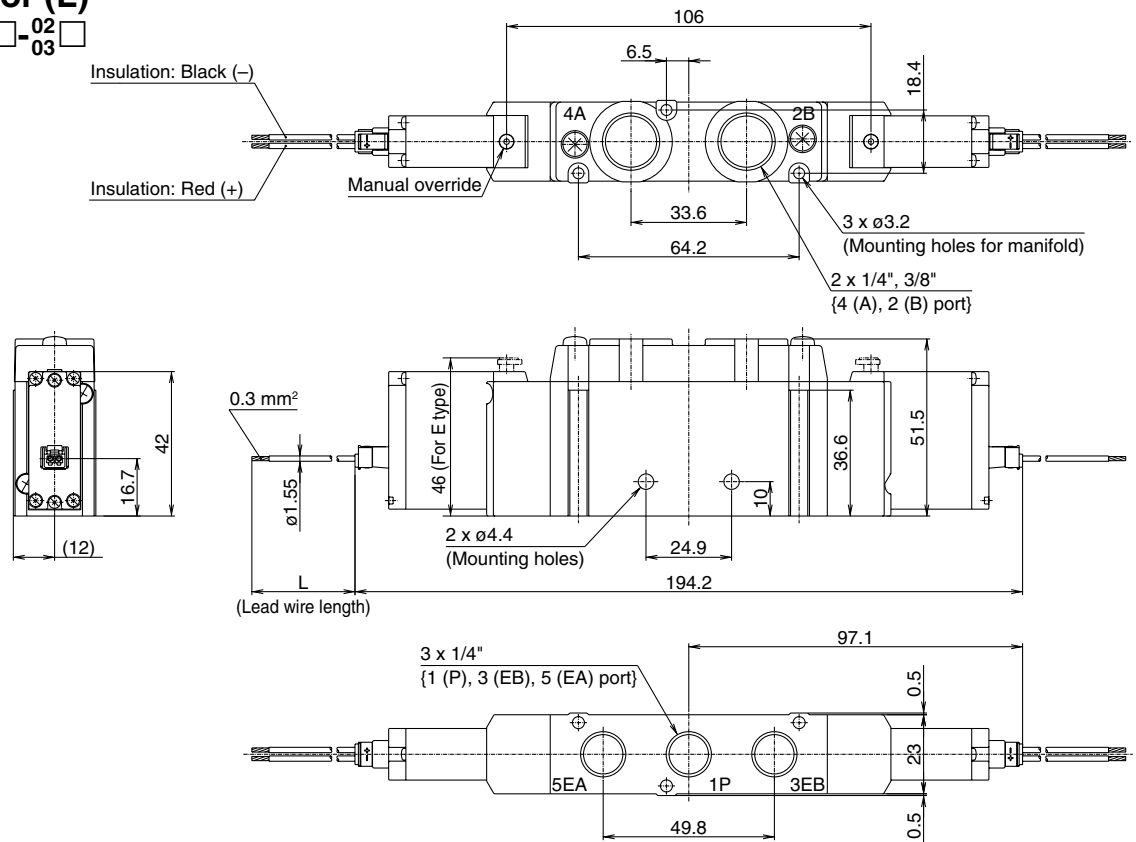
Cable type (TT)

52-SY9120-TT□□-⁰²₀₃□

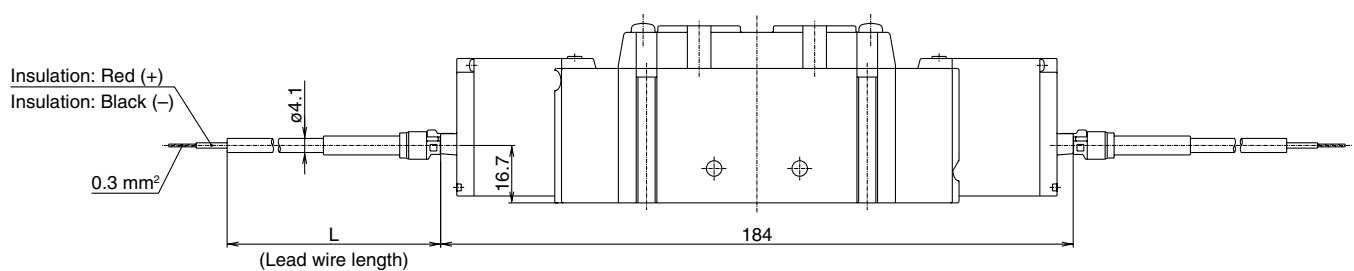


Dimensions

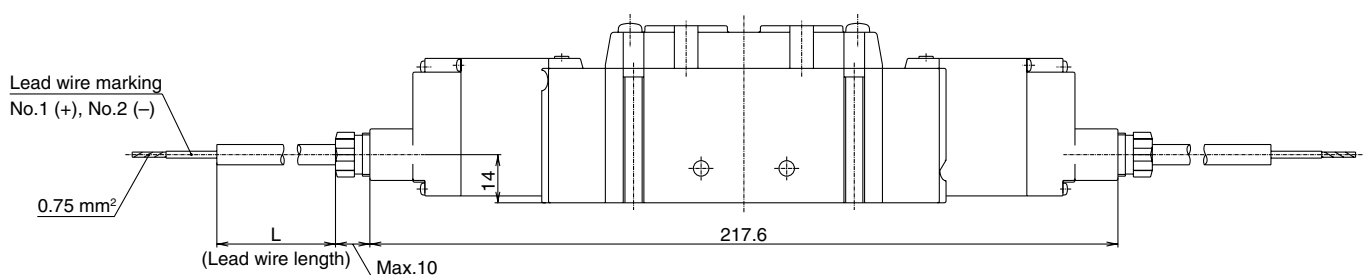
2-position double L plug connector (L) 52-SY9220-L□□-⁰²₀₃□



L plug connector with cover (LL) 52-SY9220-LL□□-⁰²₀₃□



Cable type (TT) 52-SY9220-TT□□-⁰²₀₃□

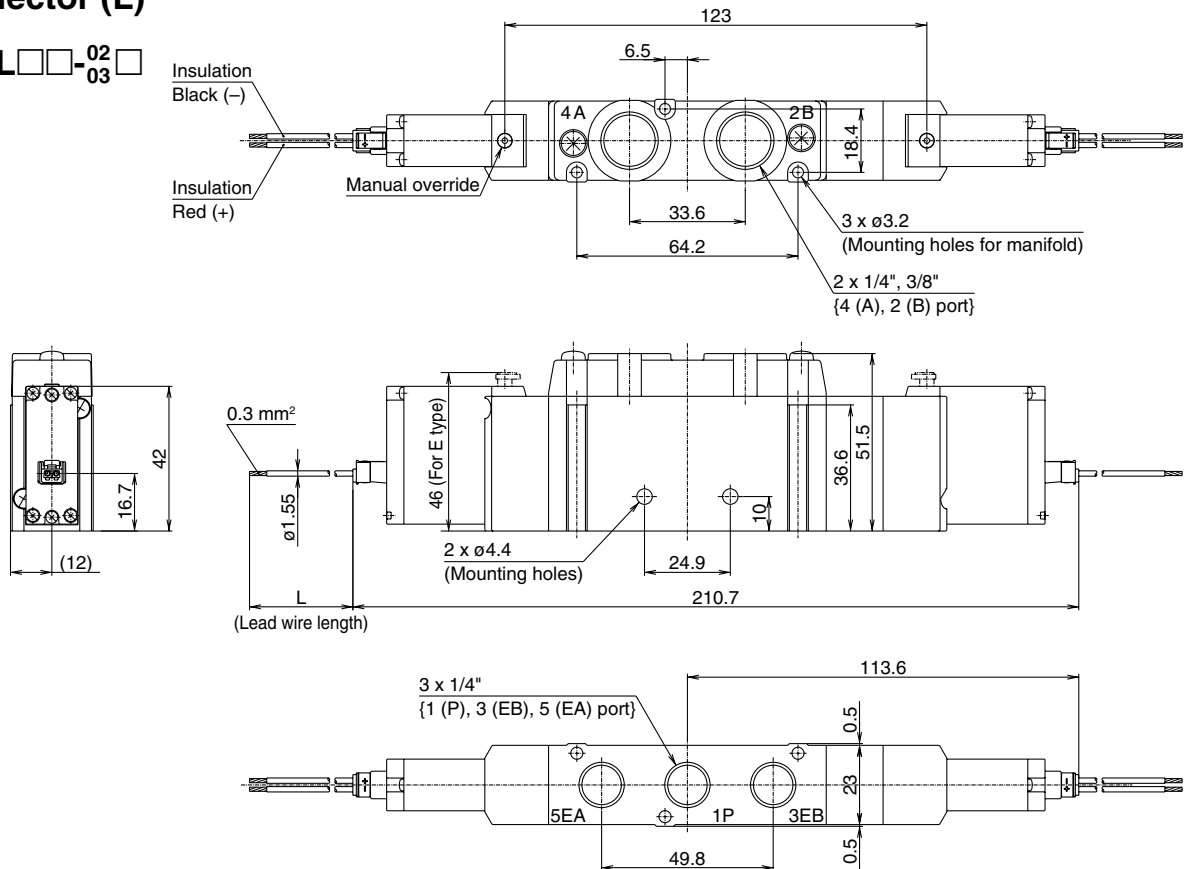


Dimensions

3-position closed centre/exhaust centre/pressure centre

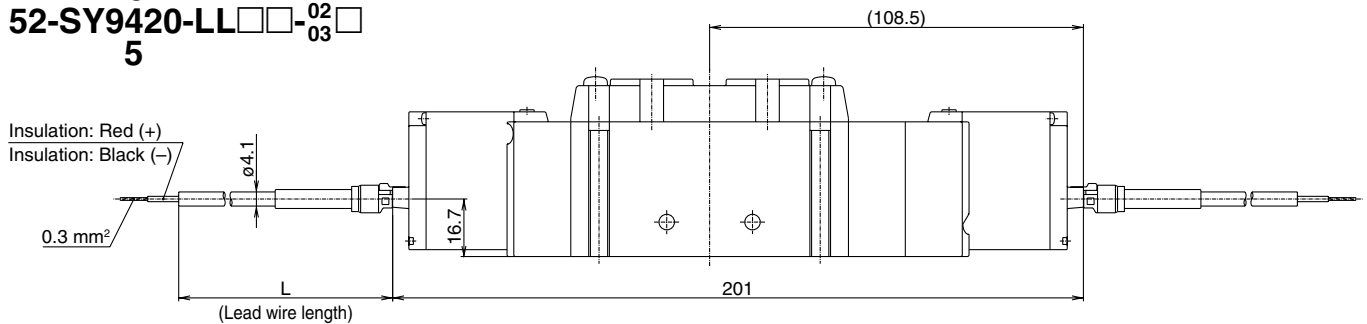
L plug connector (L)

3
52-SY9420-L□□-02□
5 03



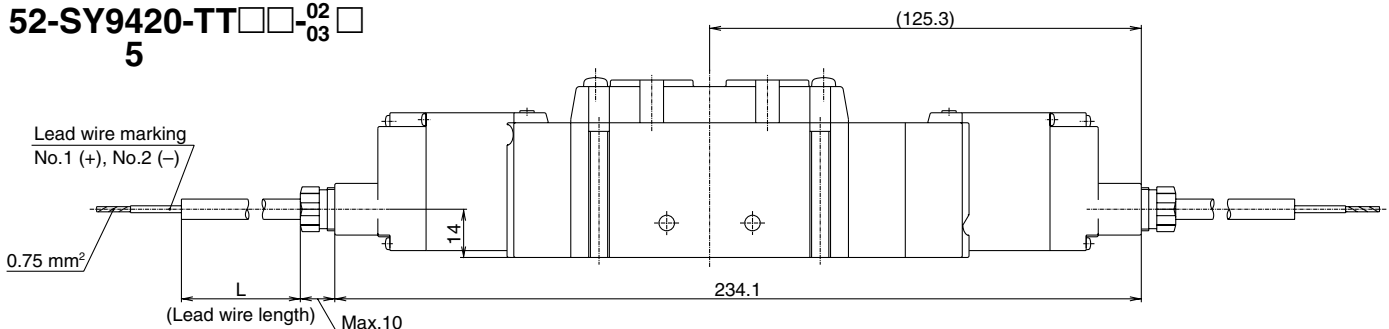
L plug connector with cover (LL)

3
52-SY9420-LL□□-02□
5 03



Cable type (TT)

3
52-SY9420-TT□□-02□
5 03

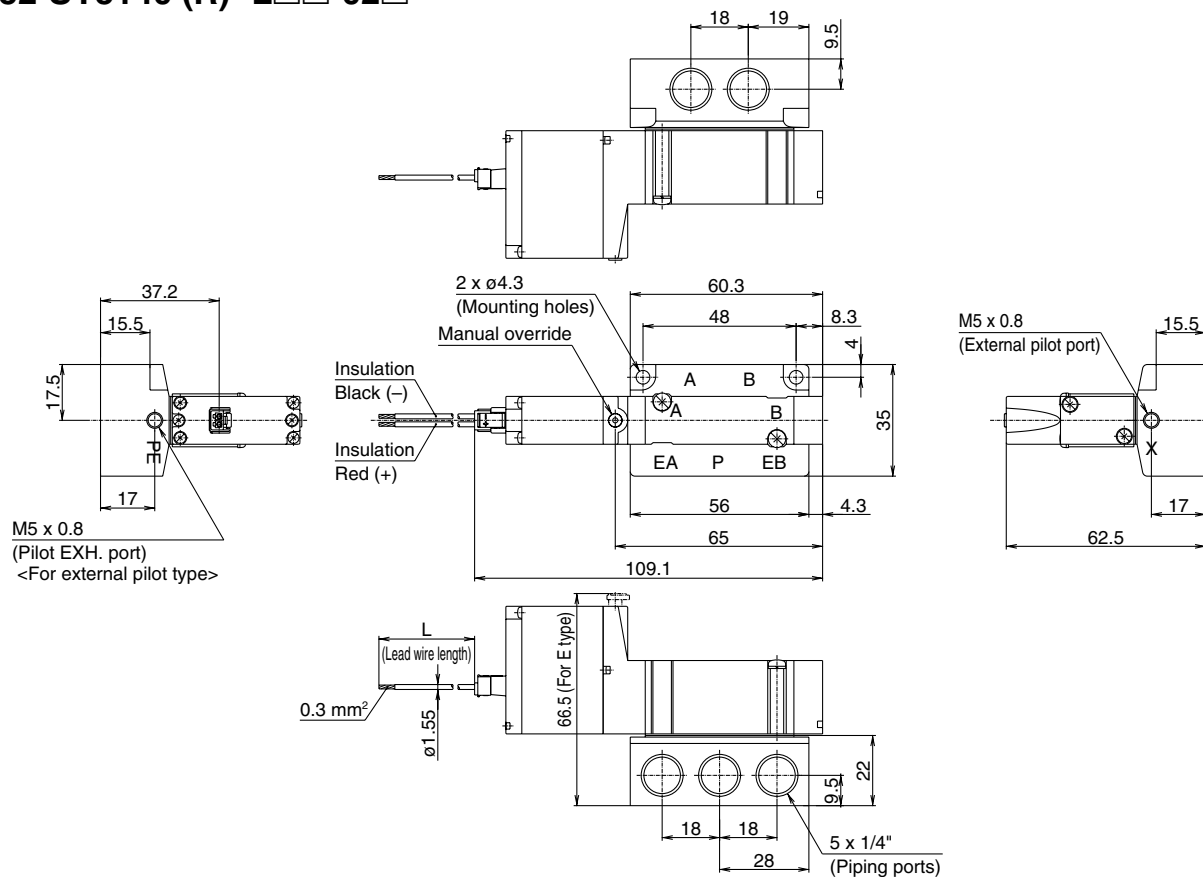


Dimensions

2-position single

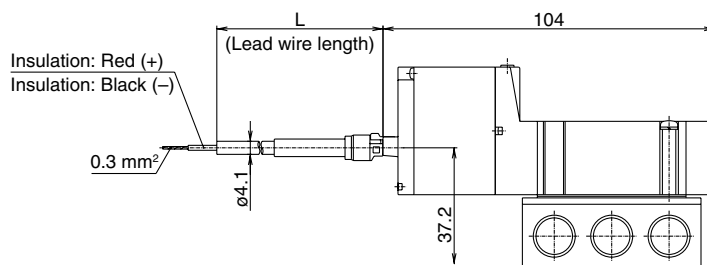
L plug connector (L)

52-SY5140 (R) -L□□-02□



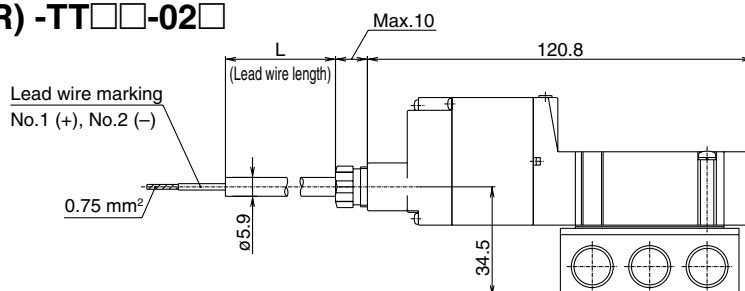
L plug connector with cover (LL)

52-SY5140 (R) -LL□□-02□



Cable type (TT)

52-SY5140 (R) -TT□□-02□

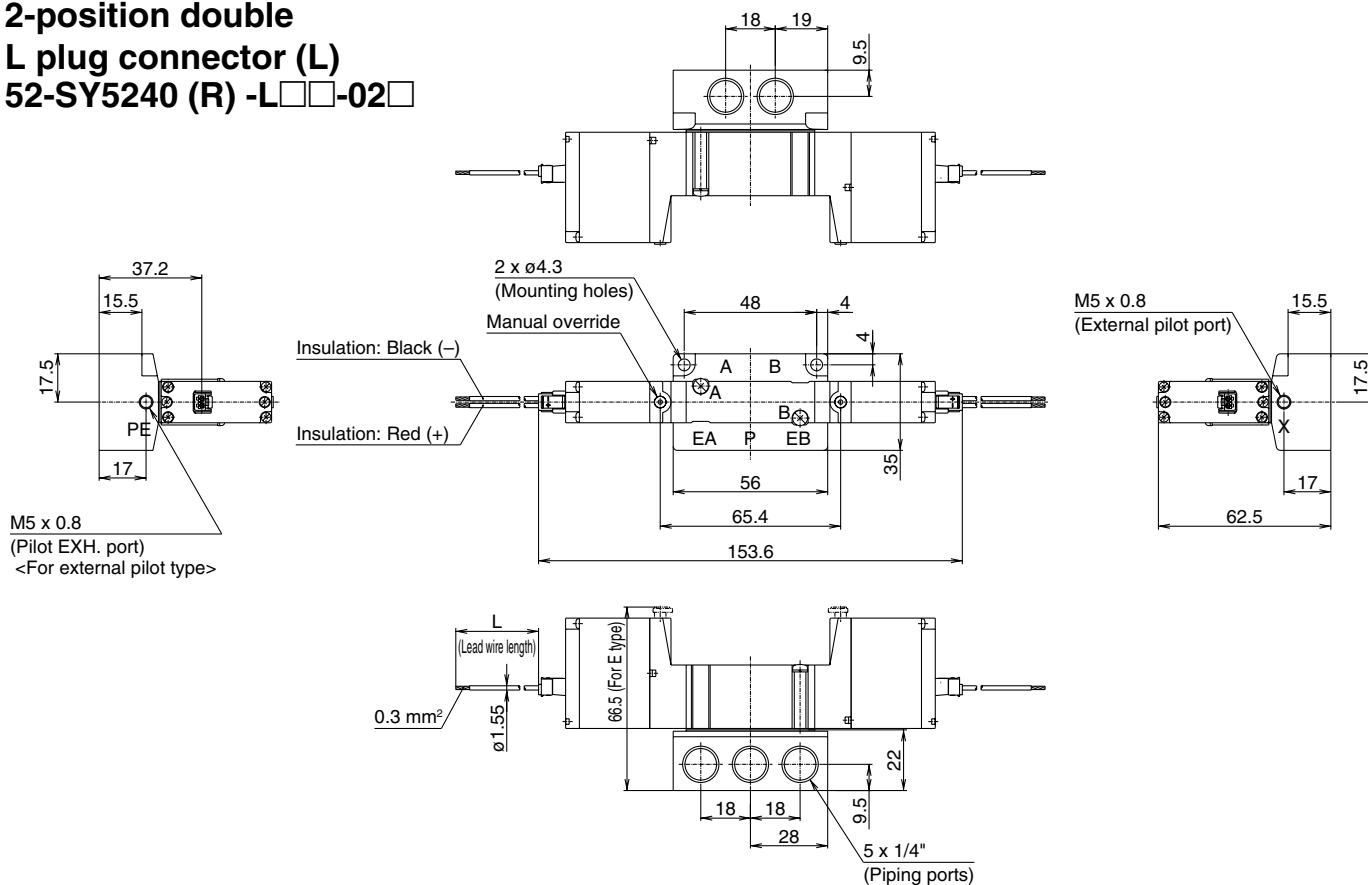


Dimensions

2-position double

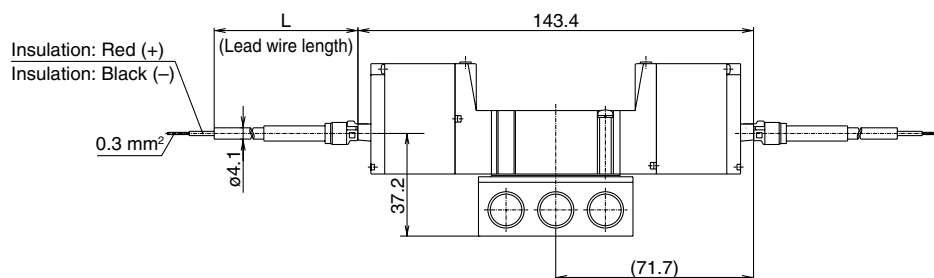
L plug connector (L)

52-SY5240 (R) -L□□-02□



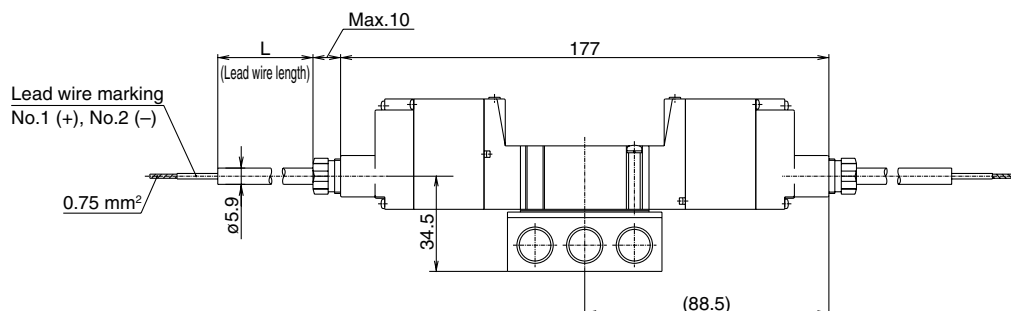
L plug connector with cover (LL)

52-SY5240 (R) -LL□□-02□



Cable type (TT)

52-SY5240 (R) -TT□□-02□

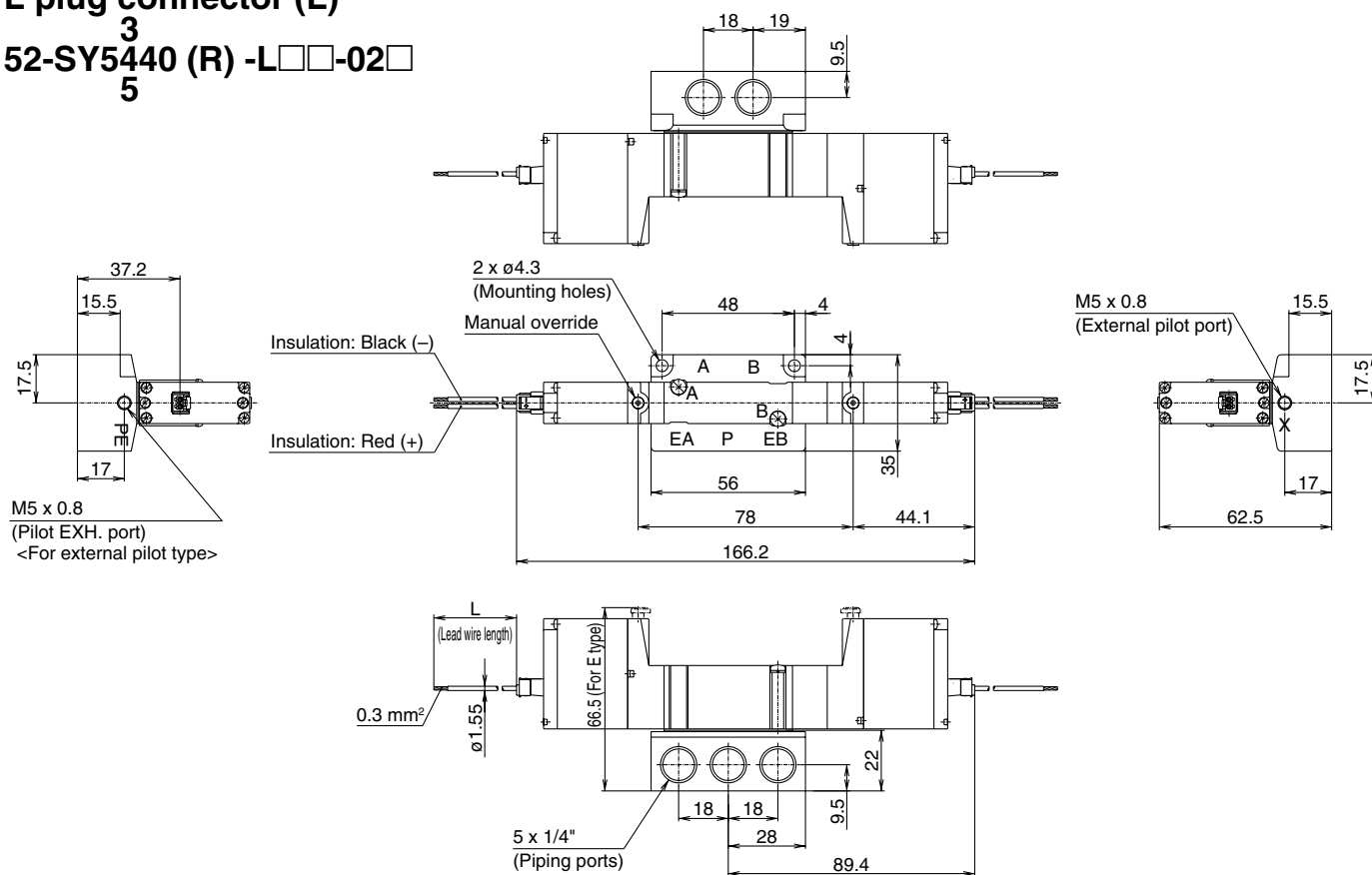


Dimensions

3-position closed centre/exhaust centre/pressure centre

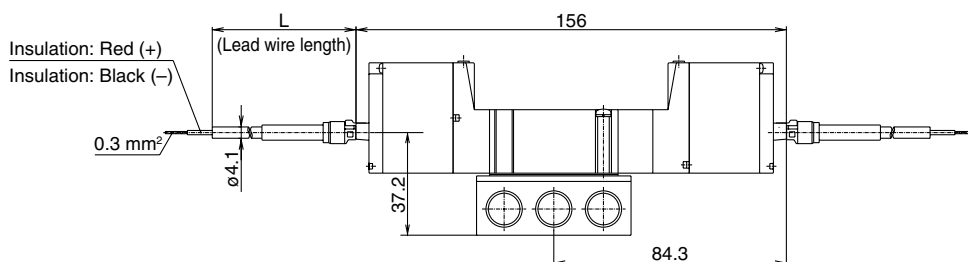
L plug connector (L)

3
52-SY5440 (R) -L□□-02□
5



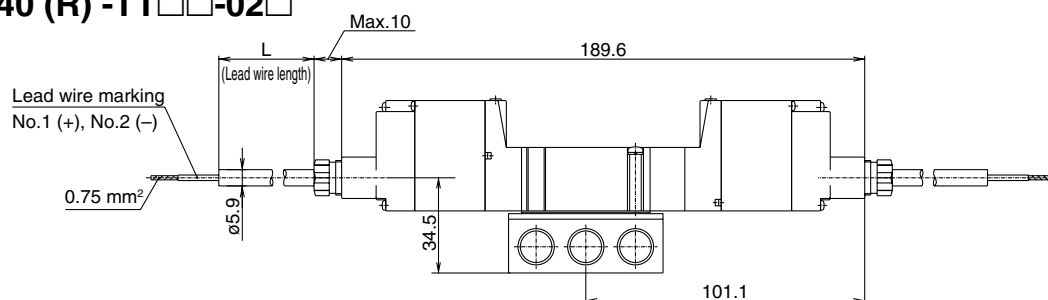
L plug connector with cover (LL)

3
52-SY5440 (R) -LL□□-02□
5



Cable type (TT)

3
52-SY5440 (R) -TT□□-02□
5

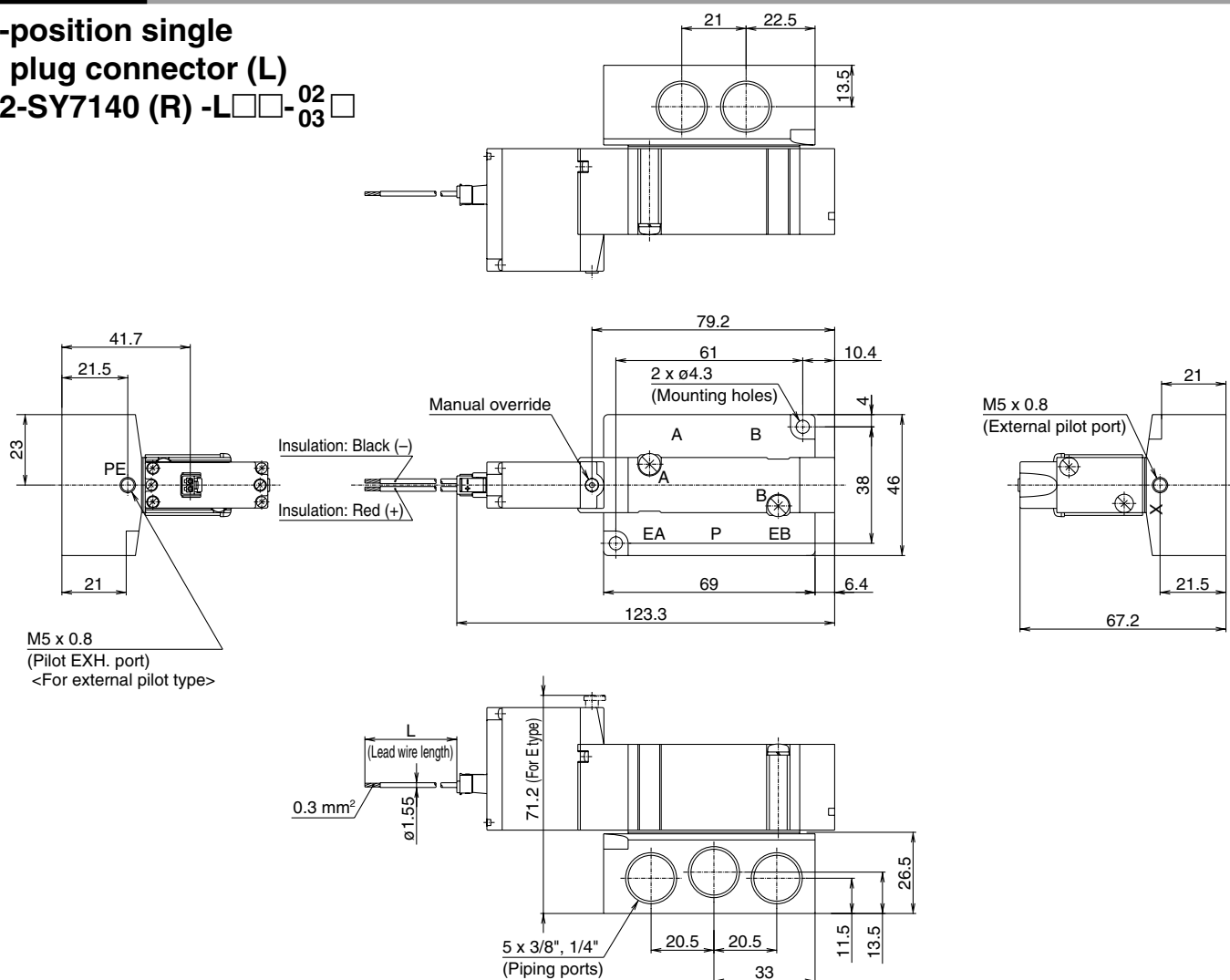


Dimensions

2-position single

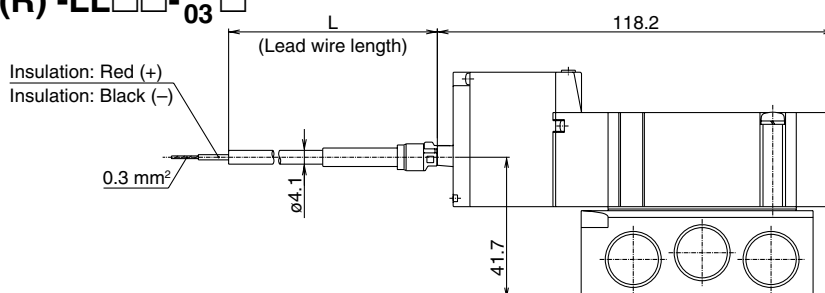
L plug connector (L)

52-SY7140 (R) -L□□-⁰²₀₃□



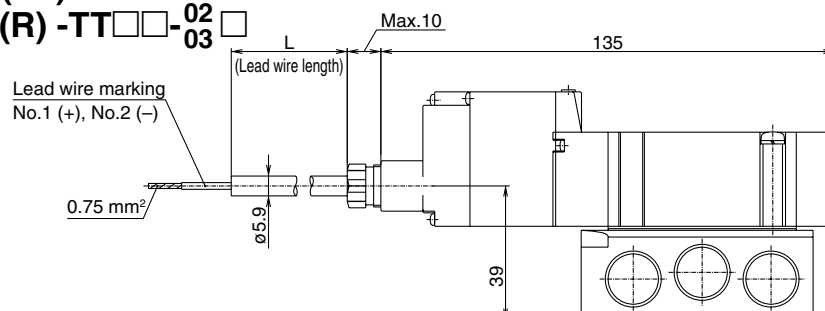
L plug connector with cover (LL)

52-SY7140 (R) -LL□□-⁰²₀₃□



Cable type (TT)

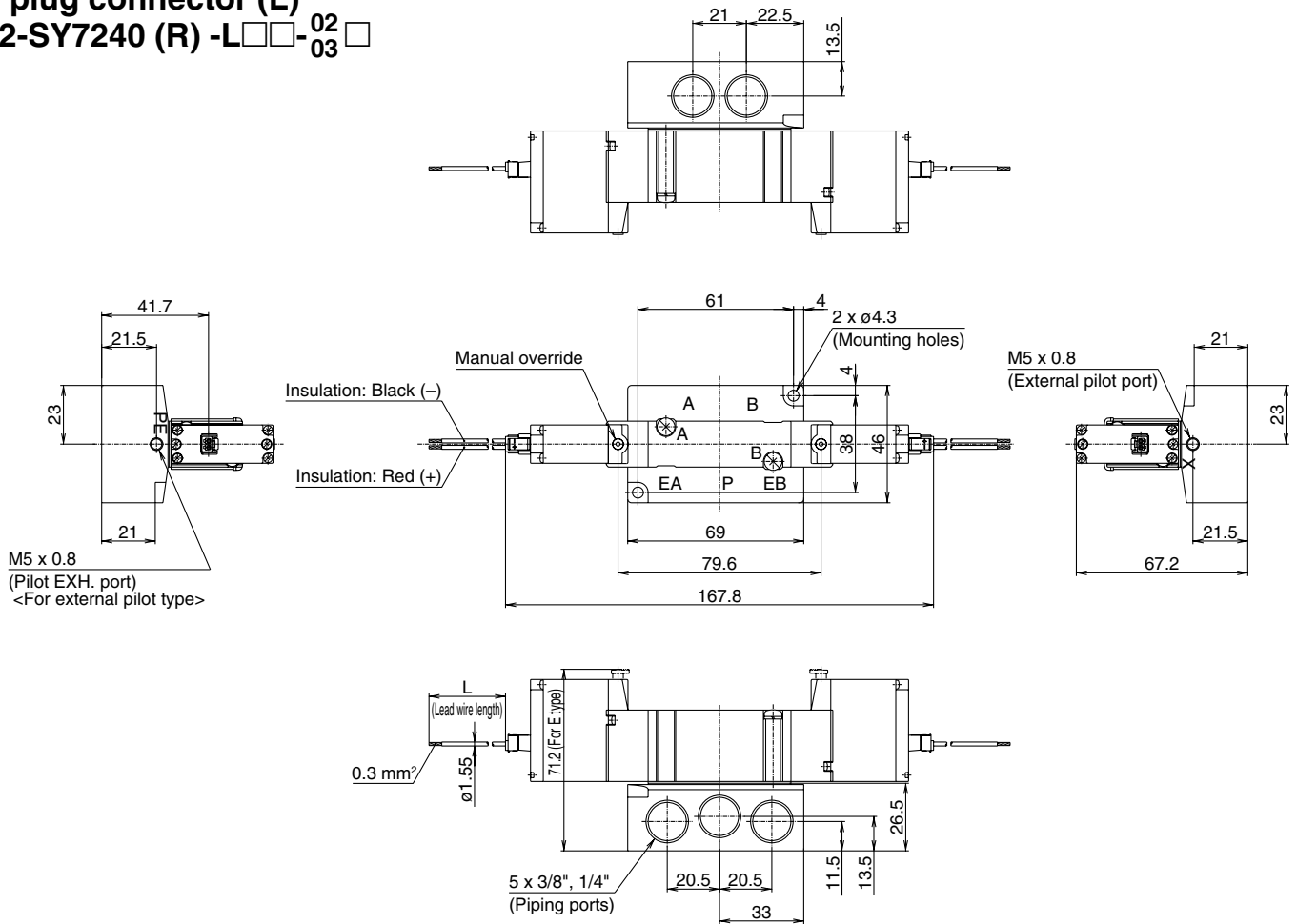
52-SY7140 (R) -TT□□-⁰²₀₃□



Dimensions

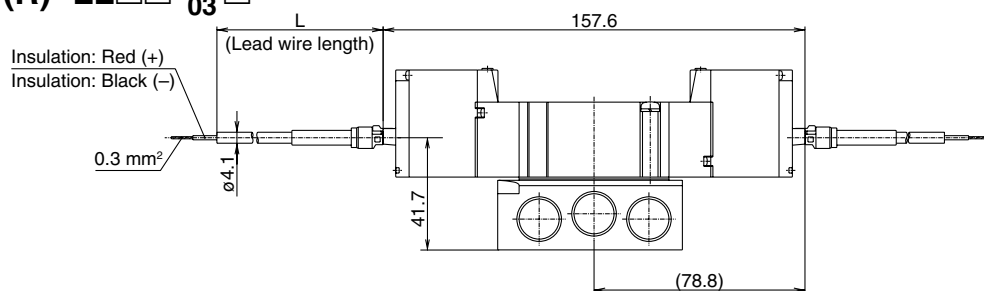
2-position double L plug connector (L)

52-SY7240 (R) -L□□-02□
03□



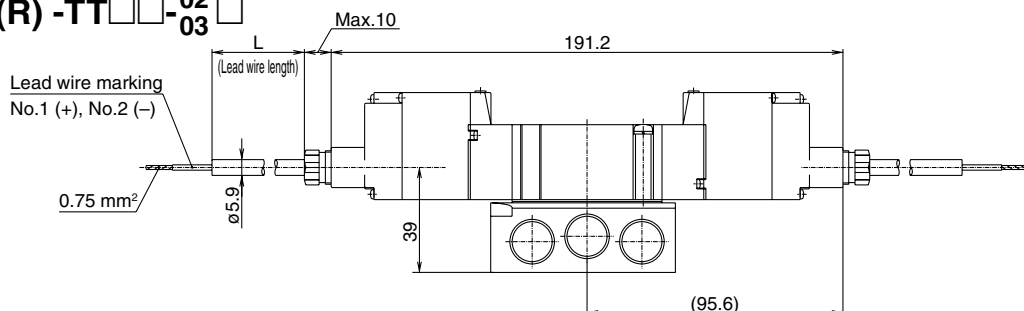
L plug connector with cover (LL)

52-SY7240 (R) -LL□□-02□
03□



Cable type (TT)

52-SY7240 (R) -TT□□-02□
03□

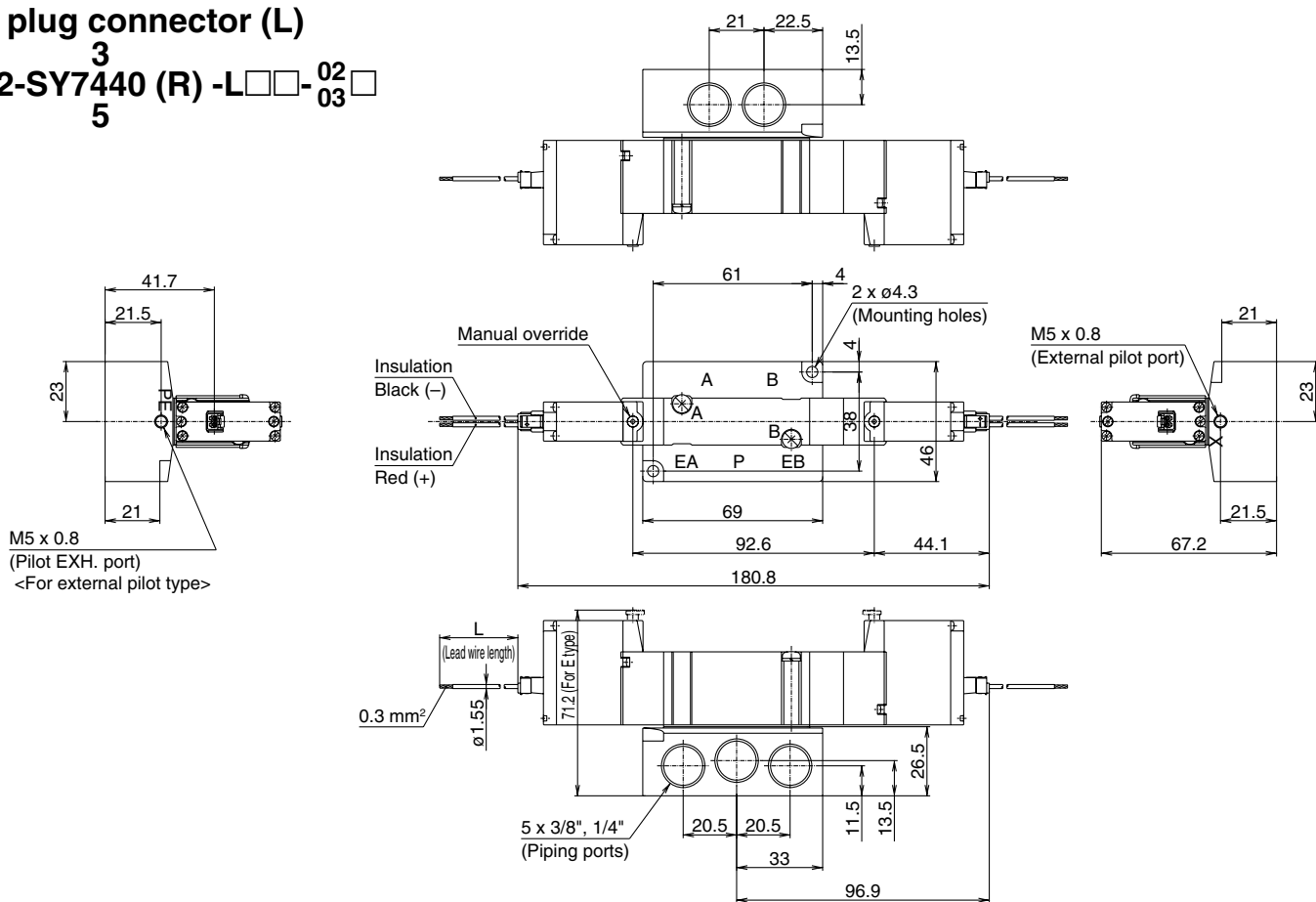


Dimensions

3-position closed centre/exhaust centre/pressure centre

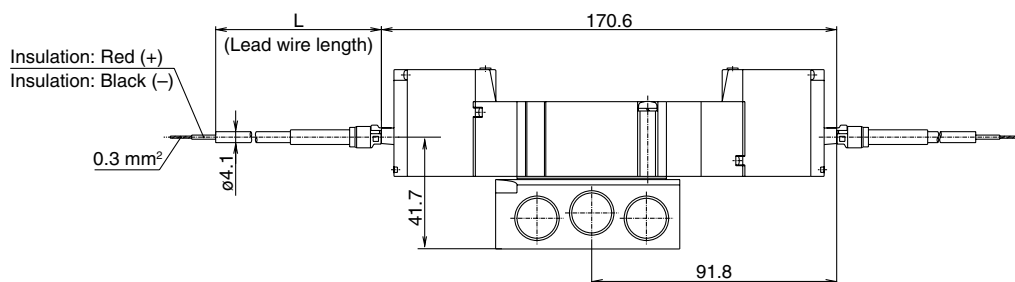
L plug connector (L)

³
52-SY7440 (R) -L□□-⁰²
□₅□₀₃□



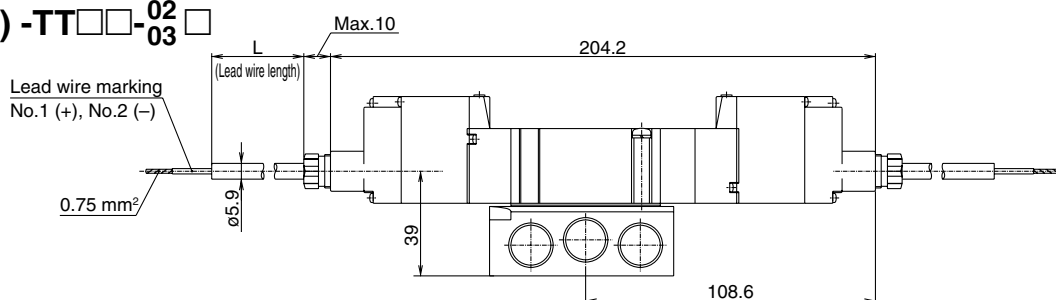
L plug connector with cover (LL)

³
52-SY7440 (R) -LL□□-⁰²
□₅□₀₃□



Cable type (TT)

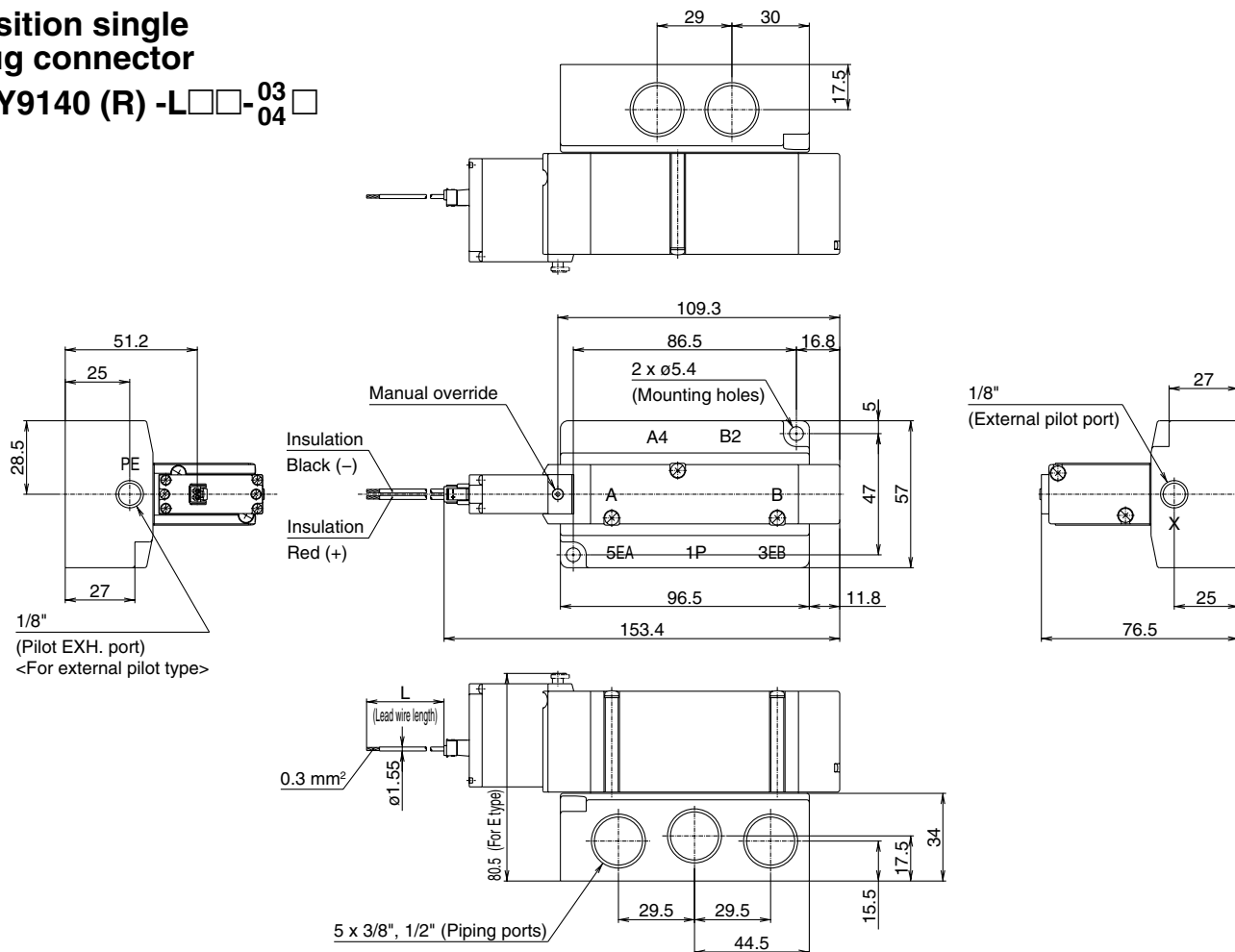
³
52-SY7440 (R) -TT□□-⁰²
□₅□₀₃□



Dimensions

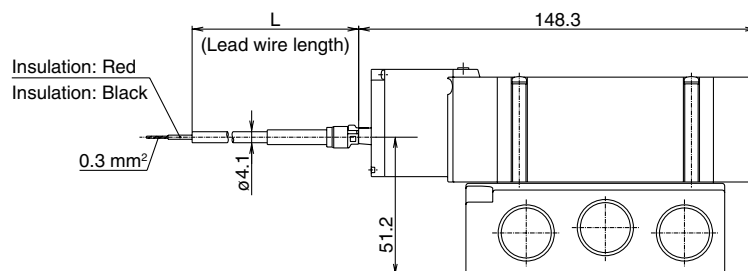
2-position single L plug connector

52-SY9140 (R) -L□□-03□
04□



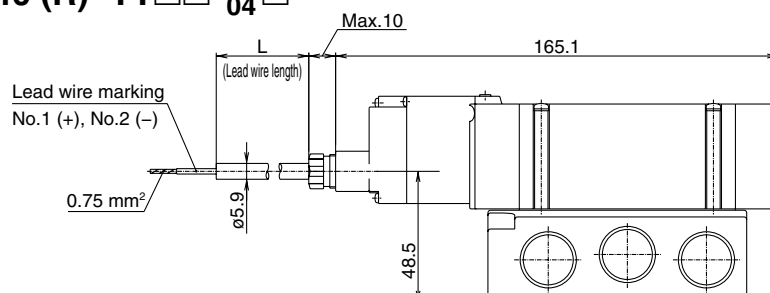
L plug connector with cover (LL)

52-SY9140 (R) -LL□□-03□
04□



Cable type (TT)

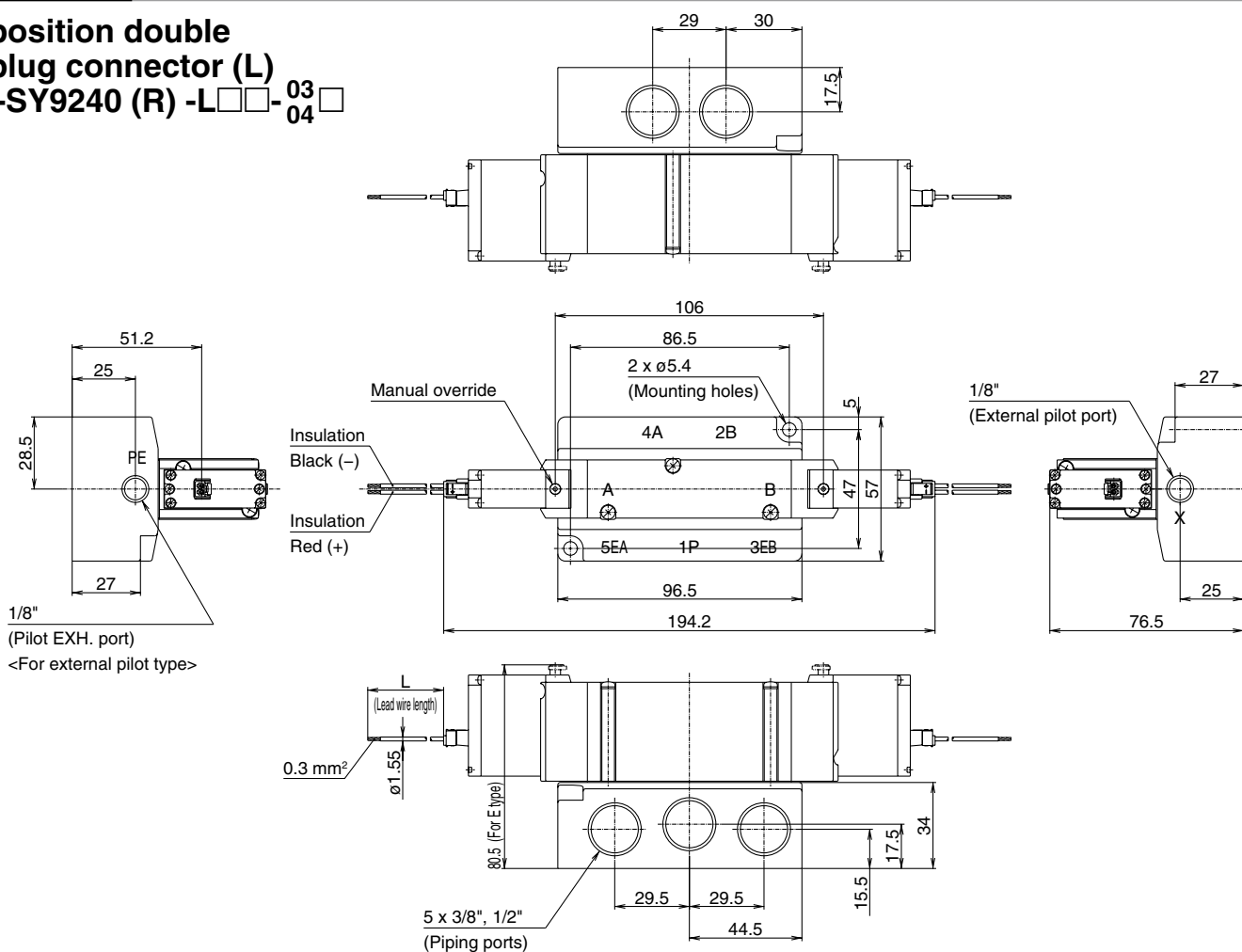
52-SY9140 (R) -TT□□-03□
04□



Dimensions

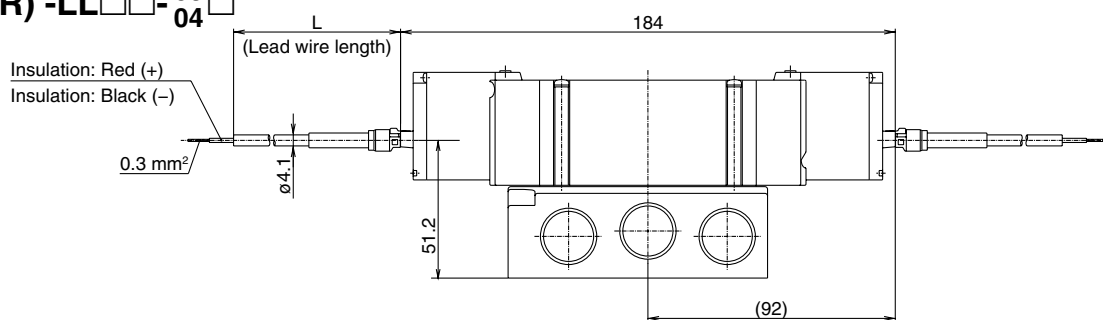
2-position double L plug connector (L)

52-SY9240 (R) -L□□-03□
04□



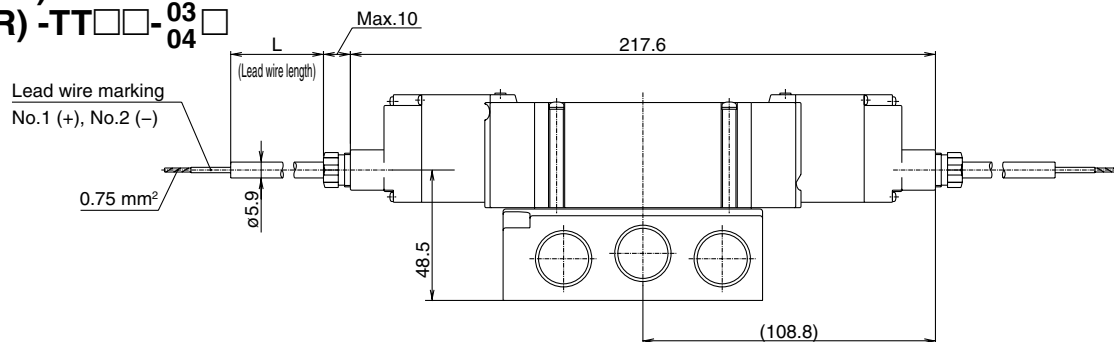
L plug connector with cover (LL)

52-SY9240 (R) -LL□□-03□
04□



Cable type (TT)

52-SY9240 (R) -TT□□-03□
04□

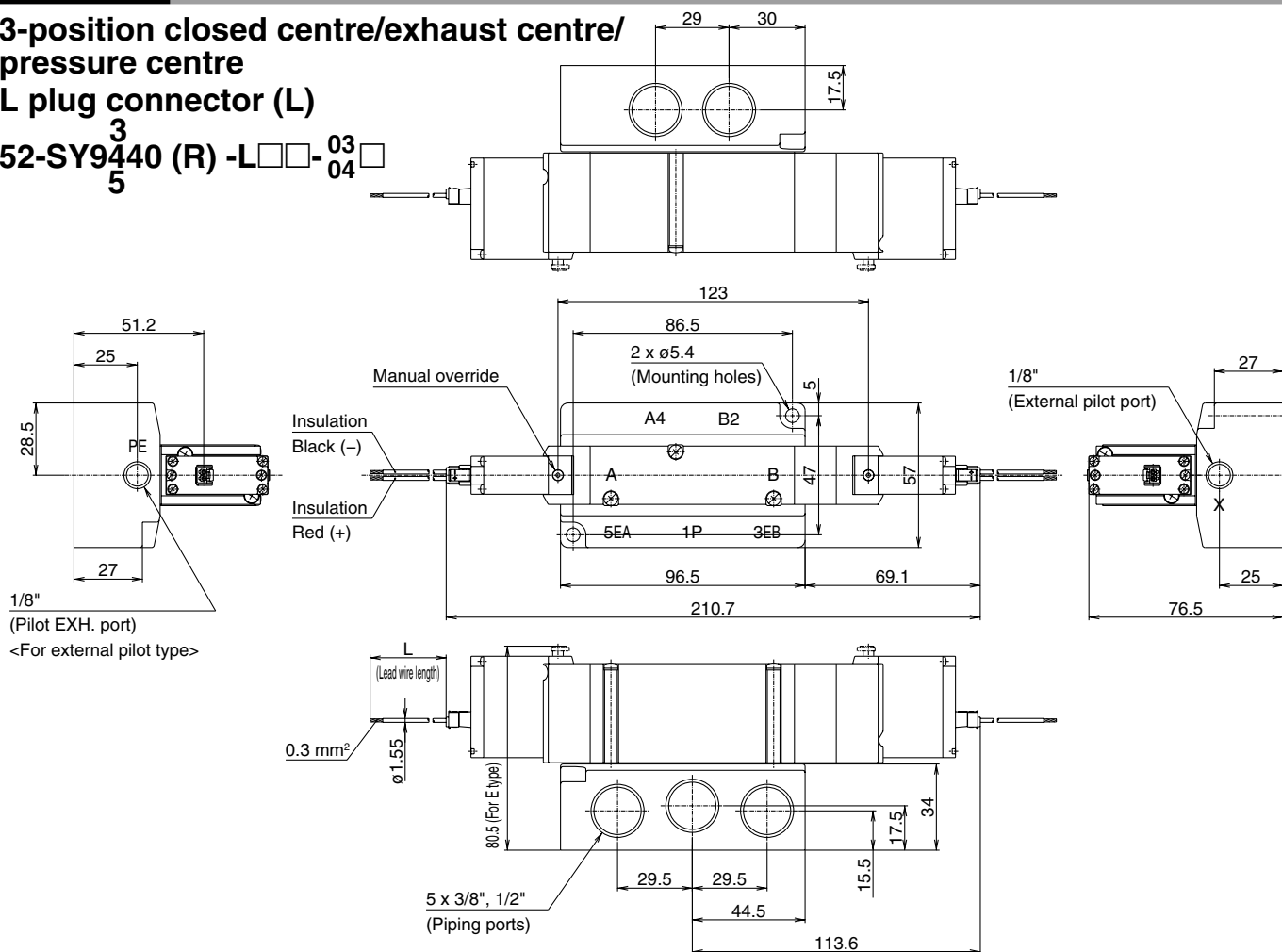


Dimensions

3-position closed centre/exhaust centre/ pressure centre

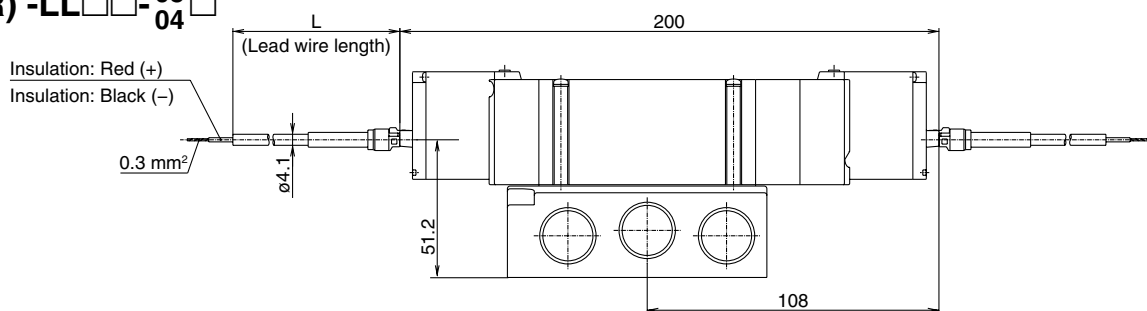
L plug connector (L)

52-SY9440 (R) -L³₅□□-03⁰³₀₄□



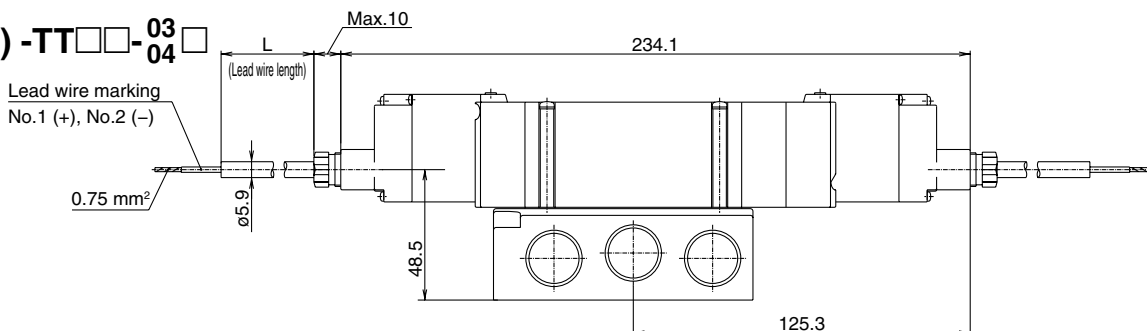
L plug connector with cover (LL)

52-SY9440 (R) -LL³₅□□-03⁰³₀₄□



Cable type (TT)

52-SY9440 (R) -TT³₅□□-03⁰³₀₄□



ATEX Compliant

5 Port Solenoid Valve Series 56-VQC1000



Manifold with M- or T- kit
II 3G Ex nA II B T5 Gc X
II 3D Ex tc III C T85°C Dc X IP67
-10°C ≤ Ta ≤ +50°C
Special condition X "Protect from Impact"

Note) Refer to Serial transmission system on page 30 for the S kit.

How to Order Manifold

56-VV5QC 1 1-08 C3 TD0 N - [] M/T/S Kit

• ATEX category 3

Series 56-VQC1000

Base mounted plug-in

Stations

01	1 station
:	:

The minimum or maximum number of stations differs depending on the electrical entry. (Refer to "Electrical Entry/Cable Length")

Cylinder port size

C3	With ø3.2 One-touch fitting
C4	With ø4 One-touch fitting
C6	With ø6 One-touch fitting
M5	M5 thread
CM	Mixed sizes and with port plug
L3	Top ported elbow, with ø3.2 One-touch fitting
L4	Top ported elbow, with ø4 One-touch fitting
L6	Top ported elbow, with ø6 One-touch fitting
L5	M5 thread
LM	Elbow port, mixture sizes
B3	Bottom ported elbow, with ø3.2 One-touch fitting
B4	Bottom ported elbow, with ø4 One-touch fitting
B6	Bottom ported elbow, with ø6 One-touch fitting
B5	M5 thread
BM	Elbow for bottom port, mixture sizes

• Option

Nil	None
B	All stations with back pressure check valve
D	With DIN rail (Rail length: Standard)
D	With DIN rail (Rail length: Special)
K	Special wiring specifications (Except double wiring)
N	With name plate
R	External pilot

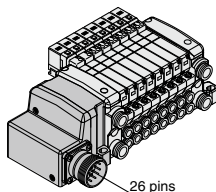
• COM

N	-COM.
----------	-------

• Kit designation/Electrical entry/Cable length

M

Kit
(Circular connector kit)

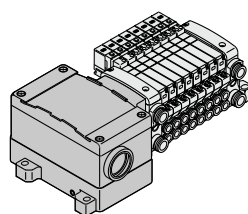


26 pins

MD0	Circular connector kit (26P) without cable	1 to 12 stations
MD1	Circular connector kit (26P) with 1.5 m cable	(Up to 24 solenoid coils)
MD2	Circular connector kit (26P) with 3 m cable	
MD3	Circular connector kit (26P) with 5 m cable	

T

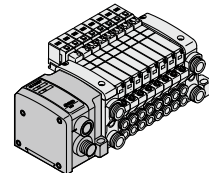
Kit
(Terminal block box kit)



TD0	Terminal block box kit	1 to 10 stations (Up to 20 solenoid coils)
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S

Kit
(Serial transmission kit: EX500 gateway type)



SI unit: **56-EX500**

Note) A separate gateway unit and communication cable are required.

SDA2	DeviceNet, PROFIBUS DP	1 to 8 stations (Up to 16 solenoid coils)
-------------	------------------------	--

* The maximum number of stations displayed in parentheses is applied to the special wiring specifications. (Option "K")
The maximum number of stations is determined by the total number of solenoids. (Single solenoid type: 1 point, Double solenoid type: 2 points)
Make sure that the total number of solenoids does not exceed the maximum number of stations. Additionally, when combining with option parts, make sure that the maximum number of stations is not exceeded.

Contact SMC for 56-EX250 with Profibus DP

All other specifications are the same as the standard products Series VQC.
For details, refer to the **WEB catalog** or Best Pneumatics No. 1.

How to Order Valves

56-VQC 1 1 0 0 - 5

ATEX category 3

Series 56-VQC1000

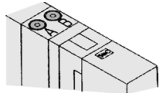
Type of actuation

1	2-position single
2	2-position double (Metal)
2	2-position double (Rubber)
3	3-position closed centre
4	3-position exhaust centre
5	3-position pressure centre
A ^{Note)}	4-position dual 3 port valve (A)
B ^{Note)}	4-position dual 3 port valve (B)
C ^{Note)}	4-position dual 3 port valve (C)

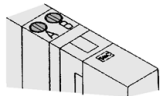
Note) For rubber seal type only.

Manual override

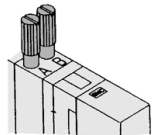
Nil: Non-locking push type (Tool required)



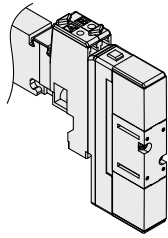
B: Locking type (Tool required)



C: Locking type (Manual)



D: Slide locking type (Manual)



Coil voltage

5	24 VDC
---	--------

Function

Nil	Standard type (1W)
R ^{Note)}	External pilot

Note) Not available for dual 3 port.

Seal type

0	Metal seal
1	Rubber seal

Manifold Option

Ground terminal	56-VQC1000
Blanking plate assembly	VVQ1000-10A-1
Individual SUP spacer	VVQ1000-P-1-C6
Individual EXH spacer	VVQ1000-R-1-C6
SUP block plate	VVQ1000-16A
EXH block plate	—
EXH block base assembly	VVQC1000-19A-□-□□
Back pressure check valve assembly [-B]	VVQ1000-18A
Port plug	VVQ0000-58A
2 stations matching fitting assembly	VVQ1000-52A-C8
Elbow fitting assembly	VVQ1000-F-L-□
Port plug	VVQ0000-58A
Blanking plug	KQ2P-□□
DIN rail mounting bracket [-D]	VVQ1000-57A(-S)
Name plate [-N]	VVQ1000-N-□

Note) Please refer to standard catalogues for details.
Do not use options other than specified in this table.
Only these standard parts without "56-" prefix can be used.

Note) "56-" solenoid valve should be installed in "56-VV5QC11" manifold.
Power consumption when starting is 1W, when maintaining 0.35W.
"56-VQC" solenoid valve has no polarity"

ATEX Compliant

5 Port Solenoid Valve Series 56-VQC2000



Manifold with M- or T- kit
II 3G Ex nA II B T5 Gc X
II 3D Ex tc III C T85°C Dc X IP67
-10°C ≤ Ta ≤ +50°C
Special condition X "Protect from Impact"

Note) Refer to Serial transmission system on page 30 for the S kit.

How to Order Manifolds

56-VV5QC 2 1-08 C4 TD0 N - [] M/T/S Kit

• ATEX category 3

Series 56-VQC2000

Base-Mounted Plug-in

Stations

01	1 station
⋮	⋮

The minimum or maximum number of stations differs depending on the electrical entry (refer to "Electrical entry/Cable length").

Cylinder port size

C4	With ø4 One-touch fitting
C6	With ø6 One-touch fitting
C8	With ø8 One-touch fitting
CM	Mixed sizes and with port plug
L4	Top ported elbow With ø4 One-touch fitting
L6	Top ported elbow With ø6 One-touch fitting
L8	Top ported elbow With ø8 One-touch fitting
LM	Elbow port, mixture sizes
B4	Bottom ported elbow With ø4 One-touch fitting
B6	Bottom ported elbow With ø6 One-touch fitting
B8	Bottom ported elbow With ø8 One-touch fitting
BM	Elbow for bottom port, mixture sizes

• Options

Nil	None
B	All stations with back pressure check valve
D	With DIN rail (rail length: standard)
D□	With DIN rail (rail length: special)
K	Special wiring specifications (except for double wiring)
N	With name plate
R	External pilot
T	Branched P and R ports on U side

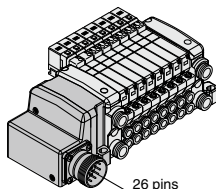
• COM.

N	-COM.
---	-------

• Kit designation/Electrical entry/Cable length

M

Kit
(Multiple connector kit)

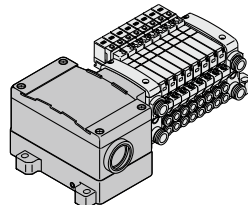


26 pins

MD0	Multiple connector kit (26P) without cable	1 to 12 stations
MD1	Multiple connector kit (26P) with 1.5 m cable	(Up to 24 solenoid coils)
MD2	Multiple connector kit (26P) with 3 m cable	
MD3	Multiple connector kit (26P) with 5 m cable	

T

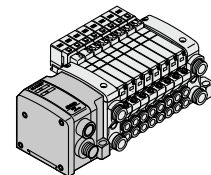
Kit
(Terminal block box kit)



TD0	Terminal block box kit	1 to 10 stations (Up to 20 solenoid coils)
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S

Kit
(Serial transmission kit: EX500 gateway type)



SI unit: 56-EX500

Note) A separate gateway unit and communication cable are required.

SDA2	DeviceNet, PROFIBUS DP	1 to 8 stations (Up to 16 solenoid coils)
------	------------------------	--

* The maximum number of stations displayed in parentheses is applied to the special wiring specifications. (Option "K")
The maximum number of stations is determined by the total number of solenoids. (Single solenoid type: 1 point, Double solenoid type: 2 points)
Make sure that the total number of solenoids does not exceed the maximum number of stations. Additionally, when combining with option parts, make sure that the maximum number of stations is not exceeded.

Contact SMC for 56-EX250 with Profibus DP.

All other specifications are the same as the standard products Series VQC.
For details, refer to the **WEB catalog** or Best Pneumatics No. 1.

How to Order Valves

56-VQC 2 1 0 0 - 5

ATEX category 3

Series 56-VQC2000

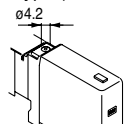
Type of actuation

1	2-position single
2	2-position double (Metal)
	2-position double (Rubber)
3	3-position closed centre
4	3-position exhaust centre
5	3-position pressure centre
A ^{Note)}	4-position dual 3-port valve (A)
B ^{Note)}	4-position dual 3-port valve (B)
C ^{Note)}	4-position dual 3-port valve (C)

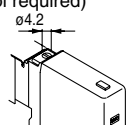
Note) For rubber seal type only.

Manual override

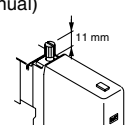
Nil: Non-locking push type (Tool required)



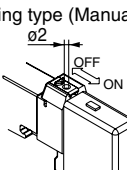
B: Locking type (Tool required)



C: Locking type (Manual)



D: Slide locking type (Manual)



Coil voltage

5	24 VDC
---	--------

Function

Nil	Standard type (1W)
R ^{Note)}	External pilot

Note) Not available for dual 3 port.

Seal type

0	Metal seal
1	Rubber seal

Manifold Options

Name	56-VQC2000
Blanking plate assembly	VVQ2000-10A-1
Individual SUP spacer	VVQ2000-P-1-C8
Individual EXH spacer	VVQ2000-R-1-C8
SUP block plate	VVQ2000-16A
EXH block plate	VVQ2000-19A
EXH block base assembly	—
Back pressure check valve assembly [-B]	VVQ2000-18A
Port plug	VVQ1000-58A
Dual flow fitting assembly	VVQ2000-52A-C10
Elbow fitting assembly	VVQ2000-F-L-□
Port plug	VVQ1000-58A
Blanking plug	KQ2P-□□
DIN rail mounting bracket [-D]	VVQ2000-57A (-S)
Name plate [-N]	VVQ2000-N-□

Notes) □: Please refer to standard catalogues for details.
Do not use options other than specified in this table.
Only these standard parts without "56-" prefix can be used.

Note) "56-" solenoid valve should be installed in "56-VV5QC21" manifold.
Power consumption when starting is 1 W, when maintaining 0.35 W.
"56-VQC" solenoid valve has no polarity.

ATEX Compliant

5 Port Solenoid Valve Series 56-VQC4000



Manifold with M- or T- kit
II 3G Ex nA II B T5 Gc X
II 3D Ex tc III C T85°C Dc X IP67
-10°C ≤ Ta ≤ +50°C
Special condition X "Protect from Impact"

Note) Refer to Serial transmission system on page 30 for the S kit.

How to Order Manifolds

56-VV5QC 4 1-08 02 TD0 N - M/T/S Kit

• ATEX category 3

Series 56-VQC4000

Base-Mounted Plug-in

Stations

01	1 station
⋮	⋮

The maximum number of stations differs depending on the electrical entry (refer to "Electrical entry/Cable length").

Cylinder port size

C8	With ø8 One-touch fitting
C10	With ø10 One-touch fitting
C12	With ø12 One-touch fitting
CM	Mixed sizes
02	1/4 thread
03	3/8 thread
B	Bottom port 1/4

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

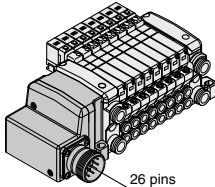
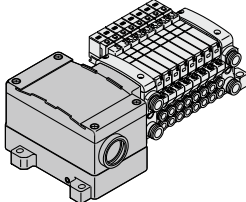
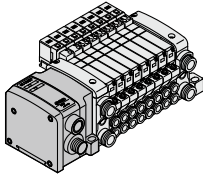
• Options

Nil	None
K	Special wiring specifications (except for double wiring)
N	With name plate (T kit only)

• COM.

N	-COM.
---	-------

• Kit designation/Electrical entry/Cable length

M Kit (Multiple connector kit)			T Kit (Terminal block box kit)			S Kit (Serial transmission kit: EX500 gateway type)		
								
						SI unit: 56-EX500		
						Note) A separate gateway unit and communication cable are required.		
MD0	Multiple connector kit (26P) without cable	1 to 12 stations	TD0	Terminal block box kit	1 to 10 stations (Up to 20 solenoid coils)	SDA2	DeviceNet, PROFIBUS DP	1 to 8 stations (Up to 16 solenoid coils)
MD1	Multiple connector kit (26P) with 1.5 m cable	Up to 24 solenoid coils						
MD2	Multiple connector kit (26P) with 3 m cable							
MD3	Multiple connector kit (26P) with 5 m cable							

* The maximum number of stations displayed in parentheses is applied to the special wiring specifications. (Option "K")
The maximum number of stations is determined by the total number of solenoids. (Single solenoid type: 1 point, Double solenoid type: 2 points)
Make sure that the total number of solenoids does not exceed the maximum number of stations. Additionally, when combining with option parts, make sure that the maximum number of stations is not exceeded.

Contact SMC for 56-EX250 with Profibus DP.

All other specifications are the same as the standard products Series VQC.
For details, refer to the **WEB catalog** or Best Pneumatics No. 1.

How to Order Valves

56 - VQC 4 1 0 0 □ - 5 □

ATEX category 3 •

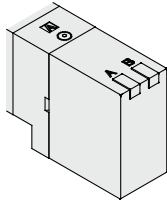
Series 56-VQC4000 •

Type of actuation •

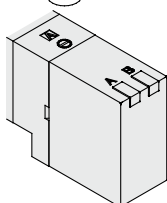
1	2-position single
2	2-position double (Metal)
	2-position double (Rubber)
3	3-position closed centre
4	3-position exhaust centre
5	3-position pressure centre
6	3-position perfect

• Manual override

Nil: Non-locking push type (Tool required)



B: Locking type (Tool required)



• Coil voltage

5	24 VDC
---	--------

• Function

Nil	Standard type (1W)
R Note)	External pilot

Note) Not available for dual 3 port.

• Seal type

0	Metal seal
1	Rubber seal

Manifold Options

Name	56-VQC4000
Blanking plate assembly	VVQ4000-10A-1
Individual SUP spacer	VVQ4000-P-1-□□
Individual EXH spacer	VVQ4000-R-1-□□
SUP block plate	VVQ4000-16A
EXH block plate	VVQ4000-16A
EXH block base assembly	—
Back pressure check valve assembly [-B]	—
Port plug	—
Dual flow fitting assembly	—
Elbow fitting assembly	—
Port plug	—
Blanking plug	KQ2P-□□
DIN rail mounting bracket [-D]	—
Name plate [-N]	—

Notes) □: Please refer to standard catalogues for details.
Do not use options other than specified in this table.
Only these standard parts without "56-" prefix can be used.

Note) "56-" solenoid valve should be installed in "56-VV5QC41" manifold.
Power consumption when starting is 1 W, when maintaining 0.35 W.
"56-VQC" solenoid valve has no polarity.

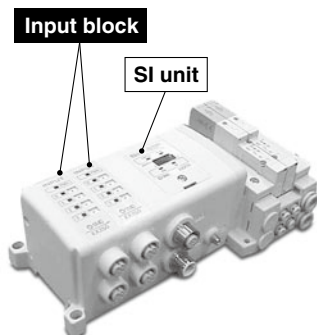
ATEX Compliant

For Input/Output

Series 56-EX250



How to Order SI Units



56-EX250-S PR1-X42

ATEX category 3

Communication Protocol

PR1 PROFIBUS DP

SI Unit Specifications

Model		56-EX250-SPR1-X42
Protocol		PROFIBUS DP-V0
Communication speed		(9.6/19.2/45.45/93.75/187.5/500 kbps), (1.5/3/6/12 Mbps)
Output specifications	Number of outputs	Max. 32 points
	Output type	Source/PNP (Negative common)
	Connected load	Solenoid valve with protection circuit for 24 VDC and 1.5 W or less surge voltage (made by SMC)
	Power supply	24 VDC + 10%/–5%
Input specifications	Current supply	Max. 2.0 A
	Number of inputs	Max. 32 points
	Input block	56-EX250-IE2-X43
	Power supply	24 VDC ± 20%
Current supply		Max. 1.0 A
Internal current consumption (Unit)		100 mA or less
Operating temperature/humidity range		+5 to +45°C at 35% to 85% RH (without condensation)
Withstand voltage		500 VAC for 1 min. between external terminal and FG
Insulation resistance		10 MΩ or more (500 VDC) between external terminal and FG
Enclosure		IP67
Weight		250 g

II 3G Ex nA II T4 X 5°C ≤ Ta ≤ 45°C
II 3D Ex tD A22 IP67 T66°C X

How to Order Input Block

56-EX250-IE 2-X43

ATEX category 3

Block type

2 M12 connector, 4 inputs

Input Block Specifications

Model		56-EX250-IE2-X43
Applicable sensor		Source type (PNP output) Sink type (NPN output)/(selected using a switch)
Number of inputs		4 inputs
Rated voltage		24 VDC
Rated input current		Approx. 8 mA
Display		Green LED is ON (when SI unit power supply is ON). Yellow LED is ON (when input signal is ON).
Connector on the input device side		M12 connector (4 pins, plug or 5 pins, plug)
Sensor supply current		Max. 30 mA/Sensor
Operating temperature/humidity range		–10 to +50°C at 35% to 85% RH (without condensation)
Withstand voltage		500 VAC for 1 min. between external terminal and FG
Insulation resistance		10 MΩ or more (500 VDC) between external terminal and FG
Enclosure		IP67
Weight		90 g

All other specifications are the same as the standard products Series EX250.
For details, refer to the **WEB catalog** or Best Pneumatics No. 1.

ATEX Compliant

Decentralized Serial Wiring (GW System, 4 Branches)

Series 56-EX500



How to Order Gateway (GW) Unit

Gateway (GW) Unit



56-EX500-G **PR1A**

ATEX category 3

Communication Protocol

PR1A	PROFIBUS DP
DN1-X8	DeviceNet™

CE  II 3G Ex nA II T4 X 5°C ≤ Ta ≤ 45°C
II 3D Ex tD A22 IP65 T57°C X

(56-EX500-GPR1A)

CE  II 3G Ex nA II T4 X 5°C ≤ Ta ≤ 45°C
II 3D Ex tD A22 IP65 T53°C X

(56-EX500-GDN1-X8)

Gateway (GW) Unit Specifications

Model	56-EX500-GDN1-X8	56-EX500-GPR1A
Applicable PLC/Communication protocol	DeviceNet™	PROFIBUS DP-V0
Communication speed	125/250/500 Kbps	(9.6/19.2/45.45/93.75/187.5/500 Kbps), (1.5/3/6/12 Mbps)
Rated voltage	24 VDC	
Power supply voltage range	Input and control unit power supply: 24 VDC ±10% Solenoid valve power supply: 24 VDC +10%/–5%	
Current consumption	200 mA or less (single GW unit)	
Inputs/outputs points	Maximum 64 inputs/64 outputs	Maximum 32 inputs/64 outputs
Input/output branches	4 branches (16 inputs/16 outputs per branch)	4 branches (8 inputs/16 outputs per branch)
Input supply current	Max. 2.8 A (Max. 0.7 A per branch)	Max. 1.4 A (Max. 0.35 A per branch)
Output supply current	Max. 3.0 A (Max. 0.75 A per branch)	
Branch cable length	5 m or less between connected devices (Total 10 m or less per branch)	
Operating temperature/humidity range	+5 to +45°C at 35% to 85% RH (without condensation)	
Withstand voltage	1000 VAC for 1 minute between terminals and housing	
Insulation resistance	2 MΩ or more (500 VDC) between terminals and housing	
Enclosure	IP65	
Weight	470 g	

All other specifications are the same as the standard products Series EX500.
For details, refer to the **WEB catalog** or Best Pneumatics No. 1.

How to Order SI Units

56 – EX500 – S001

ATEX category 3

Applicable solenoid valve: Series SV

CE  II 3G Ex nA II T5 X 5°C ≤ Ta ≤ 45°C
II 3D Ex tD A22 IP67 T52°C X

SI Unit Specifications (56-EX500-S001)

Model		56-EX500-S001
Internal current consumption		100 mA or less
Output	Number of outputs	16 outputs
	Output type	Sink/NPN (Positive common)
	Connection block	Solenoid valve (Single, double) Relay output module (1 output, 2 outputs)
	Connection block stations	Double solenoid valve, relay output module (2 outputs): Max. 8 stations Single solenoid valve, relay output module (1 output): Max. 16 stations
	Connection block supply current	Max. 0.65 A
Environment	Enclosure	IP67
	Operating temperature range	Operating: 5 to 45°C Stored: -25 to 70°C (with no freezing and condensation)
	Operating humidity range	Operating, Stored: 35 to 85%RH (with no condensation)
	Withstand voltage	1000 VAC for 1 minute between terminals and housing
	Insulation resistance	2 MΩ or more (500 VDC) between terminals and housing
Standards		CE marking, UL (CSA)
Weight		115 g
Accessory: Waterproof cap (for M12 connector socket)		EX500-AWTS (1 pc.)

How to Order SI Units

56 – EX500 – Q 0 0 1

ATEX category 3

Applicable solenoid valve:
Series SY/VQC/S0700

SI unit COM.

0	Sink/NPN (Positive common)
1	Source/PNP (Negative common)

SI unit type

1	For without EX9 output block
2	For EX9 output block mounting

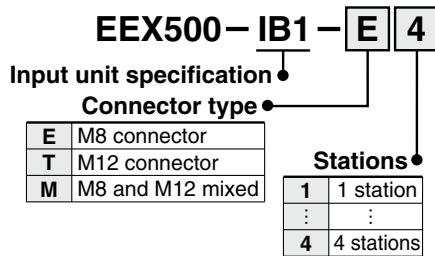
CE  II 3G Ex nA II T5 X 5°C ≤ Ta ≤ 45°C
II 3D Ex tD A22 IP67 T54°C X

SI Unit Specifications (56-EX500-Q001)

Model		56-EX500-Q001	56-EX500-Q101
Internal current consumption		100 mA or less	
Output	Number of outputs	16 outputs	
	Output type	Sink/NPN (Positive common)	Source/PNP (Negative common)
	Connection block	Positive common compatible solenoid valve (single, double)	Negative common compatible solenoid valve (single, double)
	Connection block stations	Double solenoid valve: Max. 8 stations	Single solenoid valve: Max. 16 stations
	Connection block supply current	Max. 0.75 A	
Environment	Enclosure	IP67	
	Operating temperature range	Operating: 5 to 45°C Stored: -25 to 70°C (with no freezing and condensation)	
	Operating humidity range	Operating, Stored: 35 to 85%RH (with no condensation)	
	Withstand voltage	1000 VAC for 1 minute between terminals and housing	
	Insulation resistance	2 MΩ or more (500 VDC) between terminals and housing	
Standards		CE marking, UL (CSA)	
Weight		105 g	
Accessory: Waterproof cap (for M12 connector socket)		EX500-AWTS (1 pc.)	

How to order

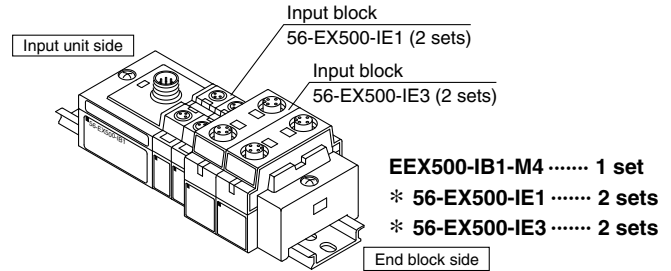
Input manifold



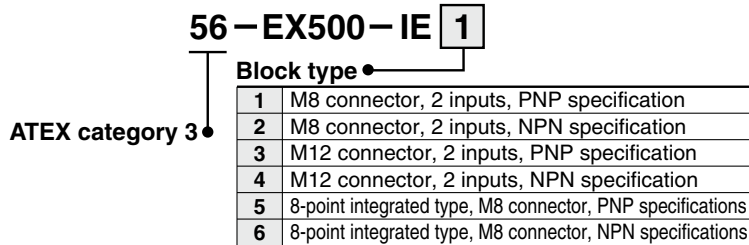
CE  II 3G Ex nA II T5 X 5°C ≤ Ta ≤ 45°C
II 3D Ex tD A22 IP65 T60°C X

When ordering an input block manifold, enter the **Input manifold part no.** + **Input block part no.** together. The **input block**, **end block** and **DIN rail** are included in the input manifold. Refer to How to Order.

Example) M8 and M12 on a single manifold



Input block



CE  II 3G Ex nA II T5 X 5°C ≤ Ta ≤ 45°C
II 3D Ex tD A22 IP65 T60°C X (Input block 56-EX500-IE1 to 4)

CE  II 3G Ex nA II T5 X 5°C ≤ Ta ≤ 45°C
II 3D Ex tD A22 IP65 T66°C X (Input block 56-EX500-IE5 to 6)

Input unit specification

Model	56-EX500-IB1
Connection block	The EX500 series input block (mixed combination is possible)
Number of inputs	Max. 8 points (56-EX500-GPR1A) Max. 16 points (56-EX500-GDN1-X8)
Block supply voltage	24 VDC
Block supply current	Max. 0.35 A (56-EX500-GPR1A) Max. 0.7 A (56-EX500-GDN1-X8)
Current consumption	100 mA or less
Operating temperature range	Operating: 5 to 45°C Stored: -25 to 70°C (with no freezing and condensation)
Operating humidity range	Operating, Stored: 35 to 85%RH (with no condensation)
Withstand voltage	1000 VAC for 1 minute between terminals and housing
Insulation resistance	2 MΩ or more (500 VDC) between terminals and housing
Enclosure	IP65
Weight ^{Note)}	100 g (Input unit + end block)

Note) Not including the DIN rail weight.

Input block specifications

Model	56-EX500-IE1,3,5	56-EX500-IE2,4,6
Input type	PNP sensor input	NPN sensor input
Sensor connector	IE1/2/5/6: M8 connector (3 pins), IE3/4: M12 connector (4 pins)	
Number of inputs	IE1/2/3/4: 2 inputs, IE5/6: 8 inputs	
Rated voltage	24 VDC	
Sensor supply current	Max. 30 mA/Sensor	
Operating temperature range	Operating: 5 to 45°C Stored: -25 to 70°C (with no freezing and condensation)	
Operating humidity range	Operating, Stored: 35 to 85%RH (with no condensation)	
Withstand voltage	1000 VAC for 1 minute between terminals and housing	
Insulation resistance	2 MΩ or more (500 VDC) between terminals and housing	
Enclosure	IP65	
Weight	IE1/2: 20 g, IE3/4: 40 g, IE5/6: 55 g	

ATEX Compliant

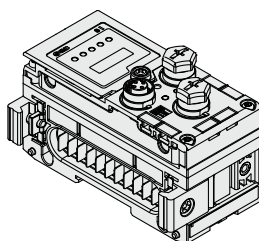
Fieldbus System

Series 56-EX600



How to Order

SI Unit



56-EX600-S **EN1** -X10

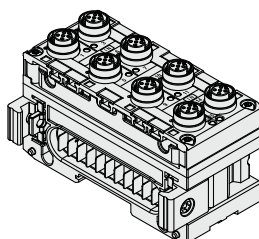
Protocol

Symbol	Description
PR1A	PROFIBUS DP
EN1	EtherNet/IP™

CE  II 3G Ex nA IIC T4 Gc X -10°C ≤ Ta ≤ 50°C (56-EX600-SPR1A-X10)
II 3D Ex tc IIIC T82°C Dc X IP67

CE  II 3G Ex nA IIC T4 Gc X -10°C ≤ Ta ≤ 50°C (56-EX600-SEN1-X10)
II 3D Ex tc IIIC T77°C Dc X IP67

Digital Input Unit



56-EX600-DX **P** **D** -X10

Input type

Symbol	Description
P	PNP
N	NPN

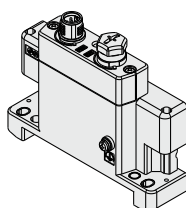
Number of Inputs, Open circuit detection, and Connector

Symbol	Number of inputs	Open circuit detection	Connector
C	8 inputs	No	M8 connector (3 pins) 8 pcs.
D	16 inputs	No	M12 connector (5 pins) 8 pcs.

CE  II 3G Ex nA IIC T4 Gc X -10°C ≤ Ta ≤ 50°C (56-EX600-DX□C-X10)
II 3D Ex tc IIIC T82°C Dc X IP67

CE  II 3G Ex nA IIC T4 Gc X -10°C ≤ Ta ≤ 50°C (56-EX600-DX□D-X10)
II 3D Ex tc IIIC T86°C Dc X IP67

End Plate



56-EX600-ED **2** -  -X10

Power connector

Symbol	Connector
2	M12 (5 pins)

Mounting method

Symbol	Description
Nil	Without DIN rail mounting bracket
2	With DIN rail mounting bracket

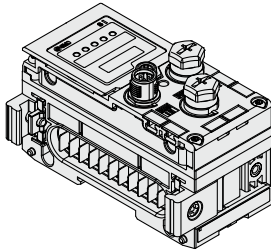
CE  II 3G Ex nA IIC T4 Gc X -10°C ≤ Ta ≤ 50°C
II 3D Ex tc IIIC T72°C Dc X IP67

SI Unit Specifications

All Units Common Specifications

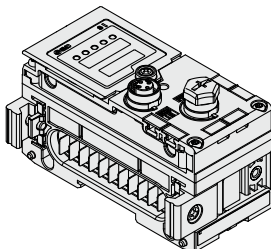
Environmental resistance	Operating temperature range	-10 to 50°C
	Storage temperature range	-20 to 60°C
	Operating humidity range	35 to 85% RH (No dew condensation)
	Withstand voltage	500 VAC for 1 minute between external terminals and FE
	Insulation resistance	500 VDC, 10 MΩ or more between external terminals and FE

SI Unit



Model		56-EX600-SPR1A-X10
Communication	Protocol	PROFIBUS DP (DP-V0)
	Device type	PROFIBUS DP Slave
	Communication speed	9.6/19.2/45.45/93.75/187.5/500 kbps 1.5/3/6/12 Mbps
	Configuration file	GSD file
	Occupation area (Number of inputs/outputs)	Max. (512 inputs/512 outputs)
Terminating resistor		Internally implemented
Internal current consumption (Power supply for Control/Input)		80 mA or less
Output	Output type	Source/PNP (Negative common)
	Number of outputs	32 outputs (8/16/24/32 outputs selectable)
	Load	Solenoid valve with surge voltage suppressor 24 VDC, 1.5 W or less (SMC)
	Power supply	24 VDC, 2 A
	Fail safe	HOLD/CLEAR/Forced power ON
Protection		Short-circuit protection
Enclosure		IP67 (Manifold assembly)
Weight		300 g

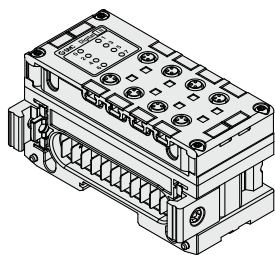
SI Unit



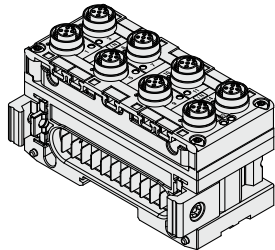
Model		56-EX600-SEN1-X10
Communication	Number of communication ports	1 port
	Protocol	EtherNet/IP™ (Conformance version: Composite 6)
	Communication speed	10/100 Mbps
	Communication method	Full duplex/Half duplex
	Configuration file	EDS file
	Occupation area (Number of inputs/outputs)	Max. (512 inputs/512 outputs)
	IP address setting range	SI Unit switch settings: 192.168.0 or 1.1 to 254 Through DHCP server: Optional address
Device information		Vendor ID: 7 (SMC Corporation) Device type: 12 (Communication Adapter) Product code: 126
Internal current consumption (Power supply for Control/Input)		120 mA or less
Output	Output type	Source/PNP (Negative common)
	Number of outputs	32 outputs (8/16/24/32 outputs selectable)
	Load	Solenoid valve with surge voltage suppressor 24 VDC, 1.5 W or less (SMC)
	Power supply	24 VDC, 2 A
	Fail safe	HOLD/CLEAR/Forced power ON
Protection		Short-circuit protection
Enclosure		IP67 (Manifold assembly)
Weight		300 g

Series EX600

Digital Unit Specifications



56-EX600-DX□C-X10



56-EX600-DX□D-X10

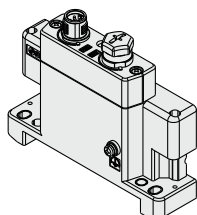
Digital Input Unit

Model		56-EX600-DXPC-X10	56-EX600-DXNC-X10	56-EX600-DXPD-X10	56-EX600-DXND-X10
Input	Input type	PNP	NPN	PNP	NPN
	Input connector	M8 (3-pin) socket ^{Note 2)}		M12 (5-pin) socket ^{Note 1)}	
	Number of inputs	8 inputs (1 input/Connector)		16 inputs (2 inputs/Connector)	
	Supplied voltage	24 VDC			
	Max. supplied current	0.25 A/Connector 2 A/Unit		0.5 A/Connector 2 A/Unit	
	Protection	Short-circuit protection			
	Input current (at 24 VDC)	9 mA or less			
	ON voltage	17 V or more (At NPN input, between the pin for input terminal and supplied voltage of +24 V) (At PNP input, between the pin for input terminal and supplied voltage of 0 V)			
	OFF voltage	5 V or less (At NPN input, between the pin for input terminal and supplied voltage of +24 V) (At PNP input, between the pin for input terminal and supplied voltage of 0 V)			
Current consumption		55 mA or less		70 mA or less	
Enclosure		IP67 (Manifold assembly)			
Weight		275 g		340 g	

Note 1) M12 (4-pin) connector can be connected.

Note 2) When connecting the M8 plug connector, the tightening torque must be 0.2 N·m $\pm$ 10%. If tightened with an excessive tightening torque, this may cause the connector thread of the Unit to break.

End Plate Specifications



56-EX600-ED2-X10

End Plate

	Model	56-EX600-ED2-X10
Power specifications	Power connector	M12 (5-pin) plug
	Power supply (for Control/Input)	24 VDC $\pm 10\%$, Class 2, 2 A
	Power supply (for Output)	24 VDC $+10/-5\%$, Class 2, 2 A
	Enclosure	IP67 (Manifold assembly)
	Weight	170 g

ATEX Compliant Air cylinder

Standard: Double Acting, Single Rod

Series 55-C76

ø32, ø40



CE  II 2GDc 90°C (T5) Ta -10°C to 40°C
110°C (T4) Ta 40°C to 60°C

How to Order

Without magnet	55 - C76	E	32	-	50	C	-	XC6A
With magnet	55 - CD76	E	32	-	50	C	-	A - XC6A

ATEX category 2 •

Built-in magnet for auto switch •

Mounting •

E	Double end
F*	Front nose
Y*	Front nose in line port

* Except air cushion type.

Bore size •

32	32 mm
40	40 mm

• Made to Order

Nil	Standard
XC6A	Stainless steel piston rod and rod-end nut
XC6B	Stainless steel piston rod, rod-end nut and mounting nut
XC22*	Fluororubber seals
XC85	Food grade grease
X2018	Long stroke

* Only with rubber cushion type.

• Auto switch mounting

A	Rail mounting
B	Band mounting

• Cushion

Nil	Rubber cushion (Standard)
C	Air cushion (only "E" execution)

• Cylinder stroke

Bore size (mm)	Standard stroke	X2018 (Long stroke)
32	10,25,40,50,80,100	
40	125,160,200,250,300	301 to 1000

Mounting Bracket Part No.

		Bore size (mm)	
Mounting bracket		32	40
Mounting bracket	Foot (1 pc.)	C76F32A	C76F40A
	Foot (2 pcs. with mounting nut 1 pc.)	C76F32B	C76F40B
	Trunnion	C76T32	C76T40
	Clevis	C76C32	C76C40
Accessory	Single knuckle joint	KJ10DA	KJ12DA
	Double knuckle joint	GKM10-20A	GKM12-24A
	Floating joint	JA25-10-150	JA40-12-175

Refer to page 69 for applicable auto switches.

Refer to page 36 for dimensions.

Specifications

Bore size (mm)	ø32	ø40
Action	Double Acting, Single rod	
Fluid	Air	
Proof pressure	1.5 MPa	
Max. operating pressure	1.0 MPa	
Min. operating pressure	0.05 MPa	
Ambient and fluid temperature	-10 to 60°C (No freezing)	
Lubrication	Not required (Non-lube)	
Piston speed	50 to 1000 mm/s	
Stroke tolerance	+1.4 0 mm	
Cushion	Rubber cushion, Air cushion	
Port size	G1/8	G1/4
Mounting	Double end, Front nose, Front nose in line port	

ATEX Compliant Air cylinder

Standard: Double Acting, Double Rod

Series 55-C76W

ø32, ø40



CE  II 2GDc 90°C (T5) Ta -10°C to 40°C
110°C (T4) Ta 40°C to 60°C

How to Order

Without magnet **55 - C76 WE 32 - 50 C - XC6A**

With magnet **55 - CD76WE 32 - 50 C - A - XC6A**

ATEX category 2

Built-in magnet for auto switch

Mounting

E	Double end type
---	-----------------

Bore size

32	32 mm
40	40 mm

• Made to Order

Nil	Standard
XC6A	Stainless steel piston rod and rod-end nut
XC6B	Stainless steel piston rod, rod-end nut and mounting nut
XC22*	Fluororubber seals
XC85	Food grade lubricant
X2018	Long stroke

* Only with rubber cushion type.

• Auto switch mounting

A	Rail mounting
B	Band mounting

• Cushion

Nil	Rubber cushion (Standard)
C	Air cushion

• Cylinder stroke

Bore size (mm)	Standard stroke	X2018 (Long stroke)
32	10,25,40,50,80,100,125	301 to 500
40	160,200,250,300	

Refer to page 69 for applicable auto switches.

Refer to pages 37 and 38 for dimensions.

Mounting Bracket Part No.

Bore size (mm)		32	40
Mounting bracket	Foot (1 pc.)	C76F32A	C76F40A
	Foot (2 pcs. with mounting nut 1 pc.)	C76F32B	C76F40B
	Trunnion	C76T32	C76T40
	Clevis	C76C32	C76C40
Accessory	Single knuckle joint	KJ10DA	KJ12DA
	Double knuckle joint	GKM10-20A	GKM12-24A
	Floating joint	JA25-10-150	JA40-12-175

Specifications

Bore size (mm)	ø32	ø40
Action	Double Acting, Double Rod	
Fluid	Air	
Proof pressure	1.5 MPa	
Max. operating pressure	1.0 MPa	
Min. operating pressure	0.05 MPa	
Ambient and fluid temperature	-10 to 60°C (no freezing)	
Lubrication	Not required (Non-lube)	
Piston speed	50 to 1000 mm/s	
Stroke tolerance	$^{+1.4}_0$ mm	
Cushion	Rubber cushion, Air cushion	
Port size	G1/8	G1/4
Mounting	Double end	

ATEX Compliant Air cylinder

Non-rotating Type: Double Acting, Single Rod

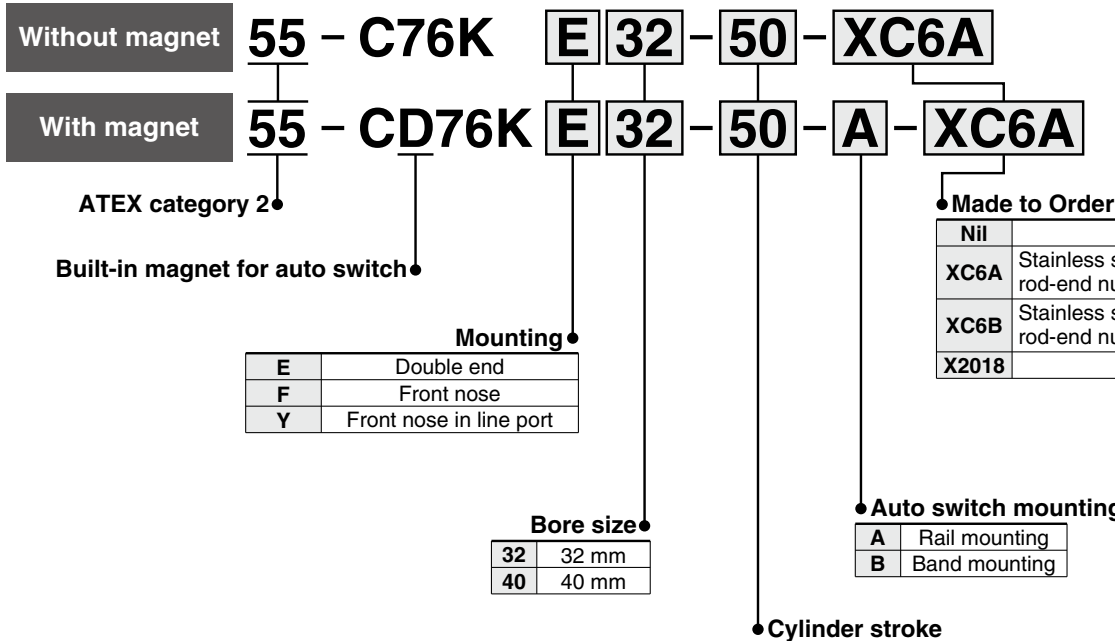
Series 55-C76K

ø32, ø40



CE  II 2GDc 90°C (T5) Ta -10°C to 40°C
110°C (T4) Ta 40°C to 60°C

How to Order



Mounting Bracket Part No.

Bore size (mm)		32	40
Mounting bracket	Foot (1 pc.)	C76F32A	C76F40A
	Foot (2 pcs. with mounting nut 1 pc.)	C76F32B	C76F40B
	Trunnion	C76T32	C76T40
	Clevis	C76C32	C76C40
Accessory	Single knuckle joint	KJ10DA	KJ12DA
	Double knuckle joint	GKM10-20A	GKM12-24A
	Floating joint	JA25-10-150	JA40-12-175

Refer to page 69 for applicable auto switches.

Refer to page 36 for dimensions.

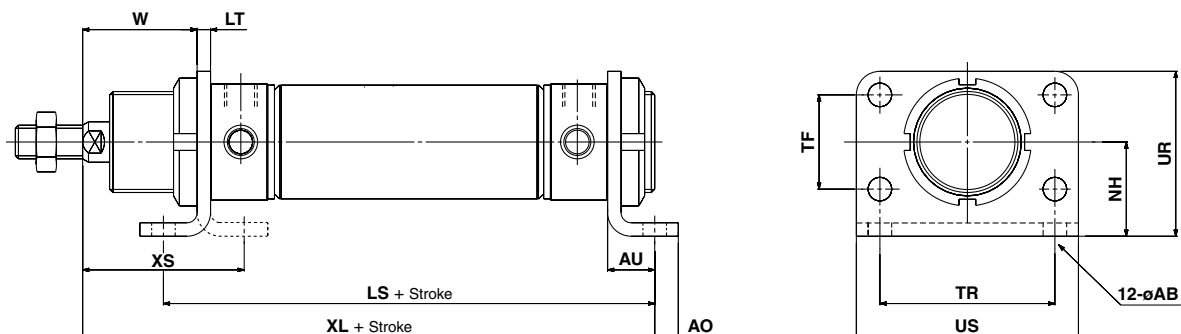
Specifications

Bore size (mm)	ø32	ø40
Action	Double Acting, Single Rod	
Fluid	Air	
Proof pressure	1.5 MPa	
Max. operating pressure	1.0 MPa	
Min. operating pressure	0.05 MPa	
Ambient and fluid temperature	-10 to 60°C (No freezing)	
Lubrication	Not required (Non-lube)	
Piston speed	50 to 1000 mm/s	
Stroke tolerance	$\begin{smallmatrix} +1.4 \\ 0 \end{smallmatrix}$ mm	
Cushion	Rubber cushion	
Port size	G1/8	G1/4
Non-rotating accuracy	±0.5°	±0.5°
Mounting	Double end, Front nose, Front nose in line port	

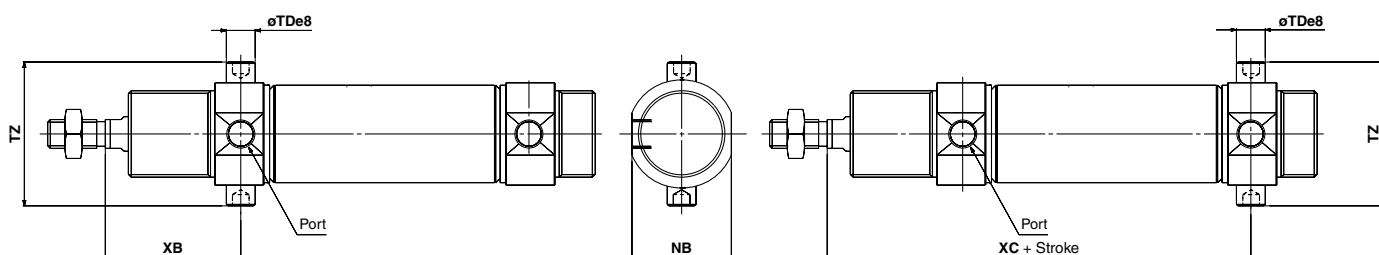
Dimensions

Double Acting, Single Rod

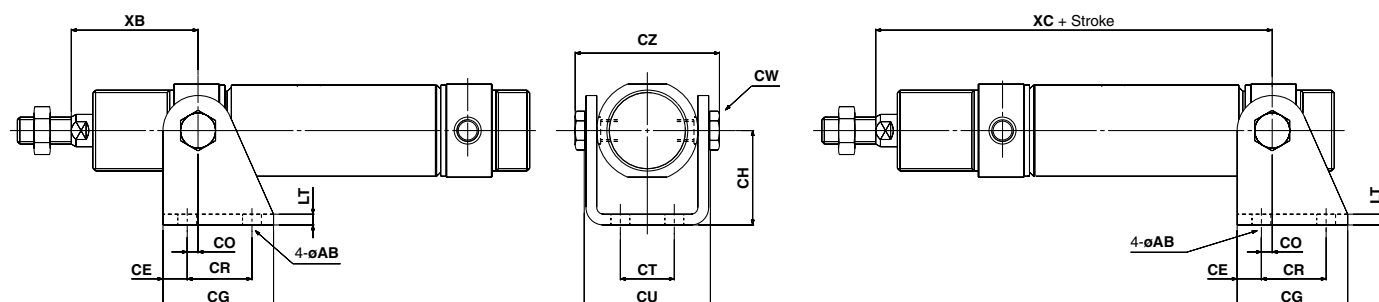
Rod foot, Head foot (Flange): C76F32^A, C76F40^B



Rod trunnion, Head trunnion: C76T32, C76T40



Rod clevis, Head clevis: C76C32, C75C40



(mm)

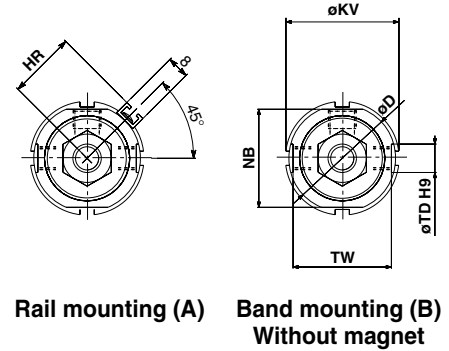
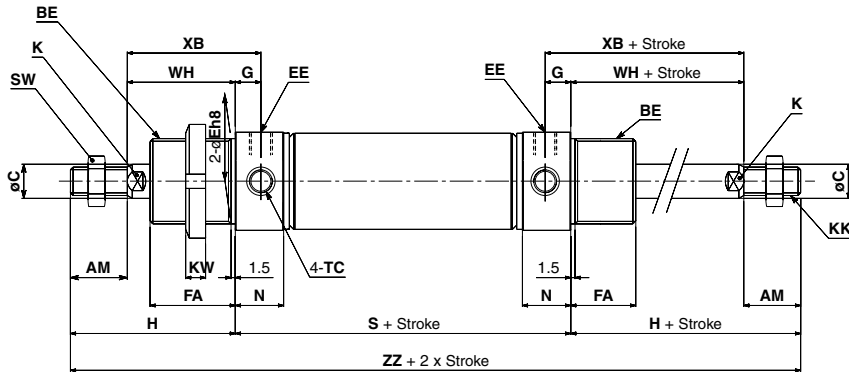
Bore size	Rod foot, Head foot (Flange)													Rod trunnion, Head trunnion					Rod clevis, Head clevis												
	AB	AO	AU	LS	LT	NH	TF	TR	UR	US	W	XL	XS	NB	TDe8	TZ	XB	XC	AB	CE	CG	CH	CO	CR	CT	CU	CW	CZ	LT	XB	XC
32	7	7	14	96	4	28	28	52	49	66	34	120	48	34.5	10 ^{-0.025 -0.047}	47.9	47	97	7	9	41	35	4	24	20	46.8	13	57.9	4	47	97
40	9	10	20	129	5	33	30	60	58	80	40	154	60	42.5	12 ^{-0.032 -0.059}	59.3	57	122	9	12	52	40	3	30	28	58.2	17	72.3	5	57	122

Dimensions

Double Acting, Double Rod

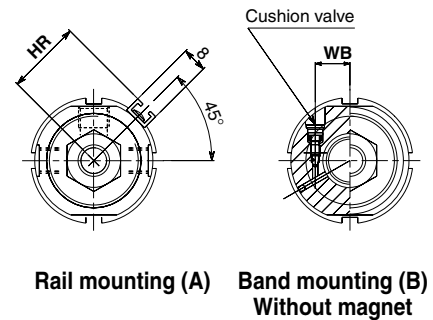
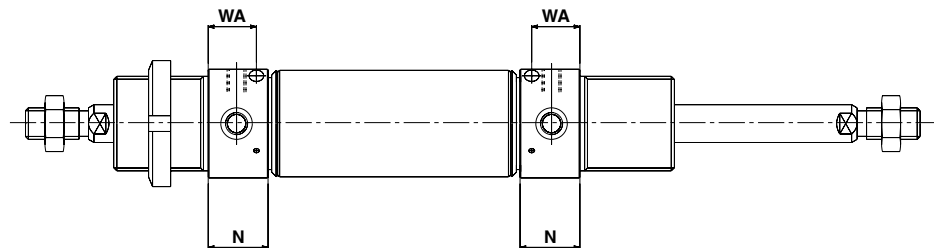
Rubber cushion: C□76WE Bore size - Stroke - □

Without magnet, Built-in magnet



Air cushion: C□76WE Bore size - Stroke C - □

Built-in magnet



(mm)

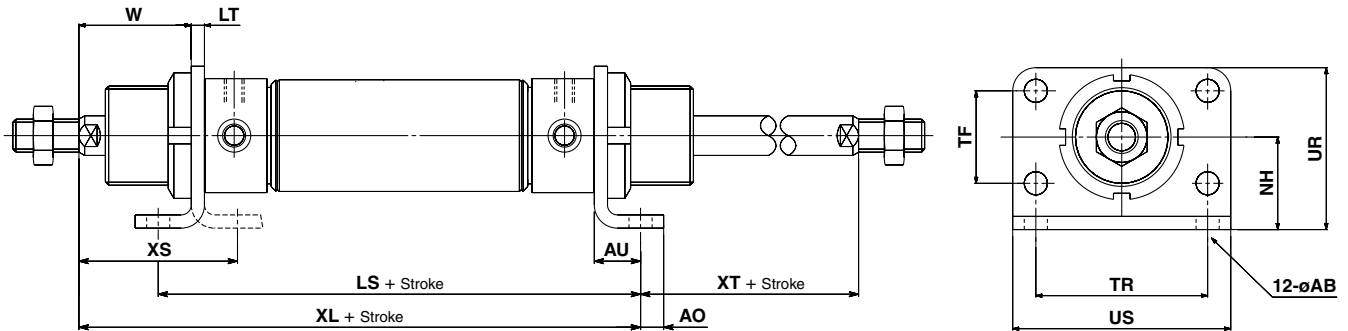
Bore size	AM	BE	C	D	Eh8	EE	FA	G	H	HR	K	KK	KV	WB	KW	N	NB	S	SW	TC	TDH9	TW	WH	XB	ZZ	WA
32	20	M30 x 1.5	12	37.5	30 ⁰ _{-0.033}	G 1/8	30	9	58	23.8	10	M10 x 1.5	38	11	7	17(19)	34.5	68	17	M8 x 1	10 ^{+0.036} ₀	34.5	38	47	184	15.3
40	24	M38 x 1.5	14	46.5	38 ⁰ _{-0.039}	G 1/4	35	12	69	28.3	12	M12 x 1.75	50	13	8	22(25)	42.5	89	19	M10 x 1	12 ^{+0.043} ₀	42.5	45	57	227	20

(): In the case of air cushion

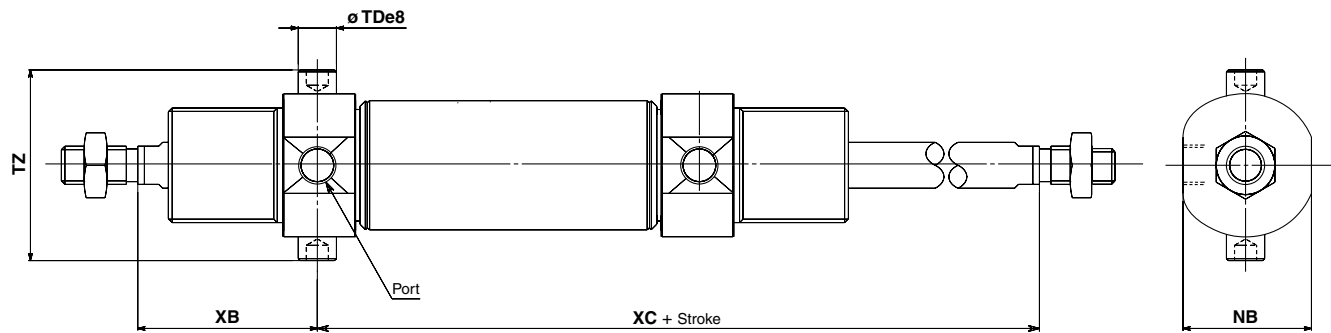
Dimensions

Double Acting, Double Rod

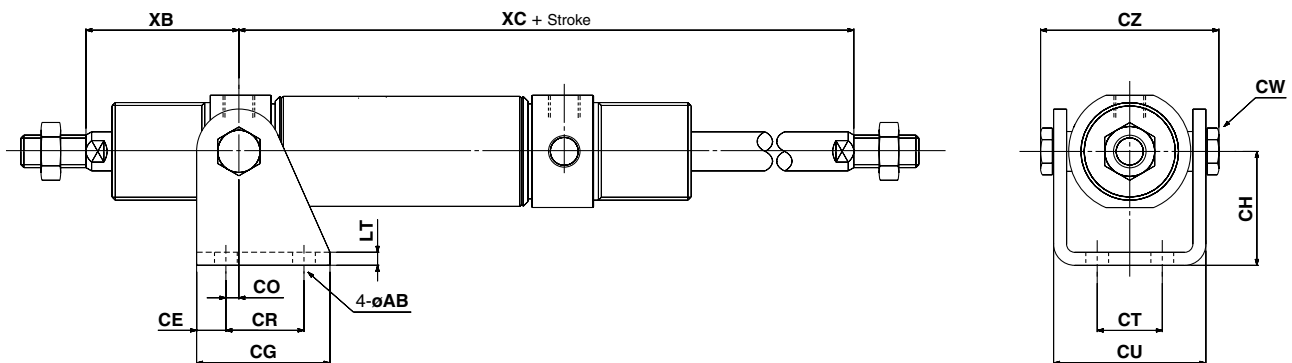
Rod foot, Head foot (Flange): C76F32^A_B, C76F40^A_B



Rod trunnion, Head trunnion: C76T32, C76T40



Clevis type: C76C32, C75C40

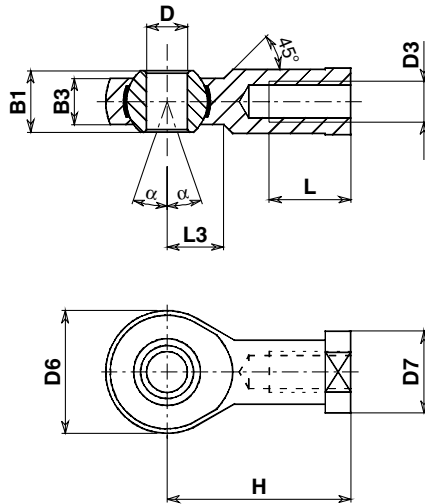


(mm)

Bore size	Rod foot, Head foot (Flange)														Rod trunnion, Head trunnion				Clevis													
	AB	AO	AU	LS	LT	NH	TF	TR	UR	US	W	XL	XS	XT	NB	TDe8	TZ	XB	XC	AB	CE	CG	CH	CO	CR	CT	CU	CW	CZ	LT	XB	XC
32	7	7	14	96	4	28	28	52	49	66	34	120	48	24	34.5	10 ^{-0.025} _{-0.047}	47.9	47	97	7	9	41	35	4	24	20	46.8	13	57.9	4	47	97
40	9	10	20	129	5	33	30	60	58	80	40	154	60	25	42.5	12 ^{-0.032} _{-0.059}	59.3	57	122	9	12	52	40	3	30	28	58.2	17	72.3	5	57	122

Series 55-C76 Accessories

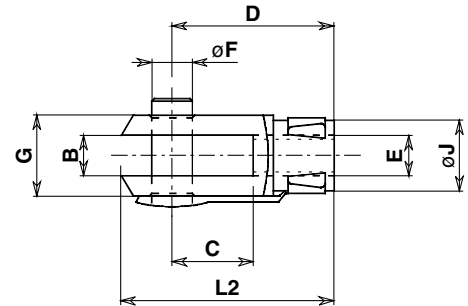
Single knuckle joint (DIN648 compliant)



Bore size	Model	Thread	D3	D _{H7}	H	D6	B3	B1	L	D7	α°	L3
32	KJ10DA	M10 x 1.5	10	43	20	10.5	14	20	19	13	14	
40	KJ12DA	M12 x 1.75	12	50	30	12	16	22	22	13	16	

(mm)

Double knuckle joint (DIN7151 compliant)

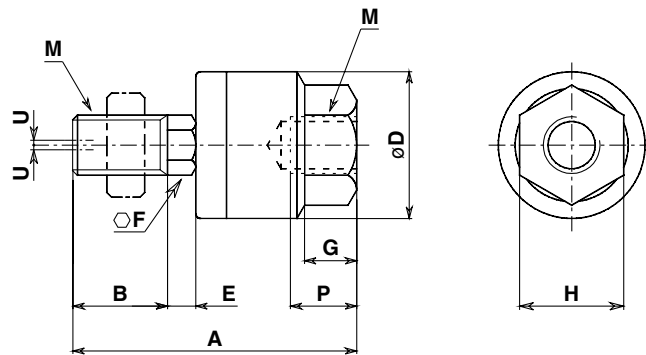


Bore size	Model	Thread	E	B	D	F	G	C	J	L2
32	GKM10-20A	M10 x 1.5	10	40	10	18	20	12	20	
40	GKM12-24A	M12 x 1.75	12	48	12	23	24	15	24	

(mm)

Floating joint/Series JA

JA25/40



Bore size	Model	M		A	B	D	E	F	G	H	Maximum screwed depth P	Allowable eccentricity U	Max. operating tension and compression power (kN)
		Nominal thread dia.	Pitch										
32	JA25-10-150	10	1.5	49.5	19.5	24	5	8	8	17	9	0.5	2.5
40	JA40-12-175	12	1.75	60	20	31	6	11	11	22	13	0.75	4.4

(mm)

ATEX Compliant ISO Cylinder [ISO/6432]

Standard: Double Acting, Single Rod

Series 55-C85

ø8, ø10, ø12, ø16, ø20, ø25



CE Ex II 2GDc 90°C (T5) Ta -10°C to 40°C
110°C (T4) Ta 40°C to 60°C

How to Order

Without magnet

55 - C85 N 16 - 40 C - XC6A

With magnet

55 - CD85 N 16 - 40 C - A - XC6A

ATEX category 2

Built-in magnet for auto switch

Mounting

N*	Basic (integrated clevis)
E	Double end
F	Front nose
Y	Front nose in line port

* Air cushion type is available for N type only.

Made to Order

Nil	Standard
XC6A	Stainless steel piston rod and rod-end nut
XC6B	Stainless steel piston rod, rod-end nut and mounting nut
XC22	Fluororubber seals
X2018	Long stroke

Auto switch mounting type

A	Rail mounting
B	Band mounting

Please order auto switches and bands separately.

Cushion

Nil	Rubber cushion (Standard)
C	Air cushion (Only "N" execution, bores 10 to 25 mm)

Specifications

Bore size (mm)	8	10	12	16	20	25
Action	Double Acting, Single Rod					
Fluid	Air					
Proof pressure	1.5 MPa					
Max. operating pressure	1.0 MPa					
Min. operating pressure	0.1 MPa	0.08 MPa		0.05 MPa		
Ambient and fluid temperature	−10 to 60°C (No freezing)					
Lubrication	Not required (Non-lube)					
Piston speed	Air cushion: 50 to 1000 mm/s, Rubber cushion: 50 to 750 mm/s					
Stroke tolerance	+1.0 0 mm				+1.4 0 mm	
Cushion	Rubber cushion	Rubber cushion, Air cushion				
Port size	M5X0.8				G1/8	
Mounting	Integrated clevis, Double end, Front nose, Front nose in line port					

Bore size

Cylinder stroke

Bore size (mm)	Standard stroke (mm)**	X2018 (Long stroke)
8*	10, 25, 40, 50, 80, 100	101 to 200
10		101 to 400
12	10, 25, 40, 50, 80, 100 125, 160, 200	201 to 400
16		
20	10, 25, 40, 50, 80, 100 125, 160, 200, 250, 300	301 to 1000
25		

* Not available with air cushion.

** Other strokes available on request.

Mounting Bracket Part No.

Bore size (mm)		8	10	12	16	20	25
Mounting bracket	Foot (1 pc.)	C85L10A		C85L16A		C85L25A	
	Foot (2 pcs. with mounting nut 1 pc.)	C85L10B		C85L16B		C85L25B	
	Flange	C85F10		C85F16		C85F25	
	Trunnion	C85T10		C85T16		C85T25	
	Clevis	C85C10		C85C16		C85C25	
Accessory	Single knuckle joint	KJ4D		KJ6D		KJ8D	KJ10D
	Double knuckle joint	GKM4-8		GKM6-10		GKM8-16	GKM10-20
	Floating joint	JA10-4-070		JA15-6-100		JA20-8-125	JA30-10-125

All other specifications are the same as the standard products Series C85.
For details, refer to the **WEB catalog** or ISO Cylinder (CAT.P-E10-2).

Refer to page 69 for applicable auto switches.

ATEX Compliant ISO Cylinder [ISO/6432]

Standard: Double Acting, Double Rod

Series 55-C85W

ø8, ø10, ø12, ø16, ø20, ø25



CE  II 2GDc 90°C (T5) Ta -10°C to 40°C
110°C (T4) Ta 40°C to 60°C

How to Order

Without magnet

55 - C85W E 16 - 40 C - XC6A

With magnet

55 - CD85WE 16 - 40 C - B - XC6A

ATEX category 2

Built-in magnet for auto switch

Mounting

E Double end

Made to Order

Nil	Standard
XC6A	Stainless steel piston rod and rod-end nut
XC6B	Stainless steel piston rod, rod-end nut and mounting nut
XC22	Fluororubber seals
X2018	Long stroke

Auto switch mounting type

A	Rail mounting
B	Band mounting

Please order auto switches and bands separately.

Cushion

Nil	Rubber cushion (Standard)
C	Air cushion (Only "N" execution, bores 10 to 25 mm)

Bore size

Cylinder stroke

Bore size (mm)	Standard stroke (mm)**	X2018 (Long stroke)
8*	10, 25, 40, 50, 80, 100	—
10	10, 25, 40, 50, 80, 100	—
12	10, 25, 40, 50, 80, 100	—
16	125, 160, 200	—
20	10, 25, 40, 50, 80, 100	301 to 500
25	125, 160, 200, 250, 300	301 to 500

* Not available with air cushion.

** Other strokes available on request.

Specifications

Bore size (mm)	8	10	12	16	20	25
Action	Double Acting, Double Rod					
Fluid	Air					
Proof pressure	1.5 MPa					
Max. operating pressure	1.0 MPa					
Min. operating pressure	0.1 MPa	0.08 MPa		0.05 MPa		
Ambient and fluid temperature	−10 to 60°C (No freezing)					
Lubrication	Not required (Non-lube)					
Piston speed	Air cushion: 50 to 1000 mm/s, Rubber cushion: 50 to 750 mm/s					
Stroke tolerance	+1.0 0 mm			+1.4 0 mm		
Cushion	Rubber cushion	Rubber cushion, Air cushion				
Port size	M5X0.8				G1/8	
Mounting	Double end					

Mounting Bracket Part No.

Bore size (mm)		8	10	12	16	20	25
Mounting bracket	Foot (1 pc.)	C85L10A	C85L16A	C85L25A			
	Foot (2 pcs. with mounting nut 1 pc.)	C85L10B	C85L16B	C85L25B			
	Flange	C85F10	C85F16	C85F25			
	Trunnion	C85T10	C85T16	C85T25			
	Clevis	C85C10	C85C16	C85C25			
Accessory	Single knuckle joint	KJ4D	KJ6D	KJ8D	KJ10D		
	Double knuckle joint	GKM4-8	GKM6-10	GKM8-16	GKM10-20		
	Floating joint	JA10-4-070	JA15-6-100	JA20-8-125	JA30-10-125		

All other specifications are the same as the standard products Series C85W.
For details, refer to the **WEB catalog** or ISO Cylinder (CAT.P-E10-2).

Refer to page 69 for applicable auto switches.

ATEX Compliant ISO Cylinder [ISO/6432]

Non-rotating Type: Double Acting, Single Rod

Series 55-C85K

ø8, ø10, ø12, ø16, ø20, ø25



CE Ex II 2GDC 90°C (T5) Ta -10°C to 40°C
110°C (T4) Ta 40°C to 60°C

How to Order

Without magnet

55 - C85 K N 16 - 40 - XC6A

With magnet

55 - CD85K N 16 - 40 - A - XC6A

ATEX category 2

Built-in magnet for auto switch

Mounting

N	Basic (integrated clevis)
E	Double end
F	Front nose
Y	Front nose in line port

Made to Order

Nil	Standard
XC6A	Stainless steel piston rod and rod-end nut
XC6B	Stainless steel piston rod, rod-end nut and mounting nut
X2018	Long stroke

Auto switch mounting type

A	Rail mounting
B	Band mounting

Please order auto switches and bands separately.

Specifications

Bore size (mm)	8	10	12	16	20	25
Action	Double Acting, Single Rod					
Fluid	Air					
Proof pressure	1.5 MPa					
Max. operating pressure	1.0 MPa					
Min. operating pressure	0.1 MPa	0.08 MPa		0.05 MPa		
Ambient and fluid temperature	-10 to 60°C (No freezing)					
Lubrication	Not required (Non-lube)					
Piston speed	Rubber cushion: 50 to 750 mm/s					
Stroke tolerance	+1.0 0 mm				+1.4 0 mm	
Cushion	Rubber cushion					
Port size	M5X0.8				G1/8	
Non-rotating accuracy	±1.5°		±1°		±0.7°	
Mounting	Integrated clevis, Double end, Front nose, Front nose in line port					

Bore size

Cylinder stroke

Bore size (mm)	Standard stroke (mm)*	X2018 (Long stroke)
8	10, 25, 40, 50, 80, 100	101 to 200
10		101 to 400
12		201 to 400
16	10, 25, 40, 50, 80, 100 125, 160, 200	301 to 1000
20	10, 25, 40, 50, 80, 100 125, 160, 200, 250, 300	
25	10, 25, 40, 50, 80, 100 125, 160, 200, 250, 300	

* Other strokes available on request.

Mounting Bracket Part No.

Bore size (mm)		8	10	12	16	20	25
Mounting bracket	Foot (1 pc.)	C85L10A	C85L16A	C85L25A			
	Foot (2 pcs. with mounting nut 1 pc.)	C85L10B	C85L16B	C85L25B			
	Flange	C85F10	C85F16	C85F25			
	Trunnion	C85T10	C85T16	C85T25			
	Clevis	C85C10	C85C16	C85C25			
Accessory	Single knuckle joint	KJ4D	KJ6D	KJ8D	KJ10D		
	Double knuckle joint	GKM4-8	GKM6-10	GKM8-16	GKM10-20		
	Floating joint	JA10-4-070	JA15-6-100	JA20-8-125	JA30-10-125		

All other specifications are the same as the standard products Series C85K. For details, refer to the **WEB catalog** or ISO Cylinder (CAT.P-E10-2).

Refer to page 69 for applicable auto switches.

ATEX Compliant ISO Cylinder

Standard: Double Acting, Single Rod

Series 55-C95

ø160, ø200, ø250



CE  II 2GDc 95°C (T5) Ta -10°C to 40°C
115°C (T4) Ta 40°C to 60°C

How to Order

Without magnet **55 - C95S** **B** **160** - **100** - **XC6**

With magnet **55 - C95SD** **B** **160** - **100** - **XC6**

ATEX category 2

Built-in magnet for auto switch

Mounting

B	Basic/without bracket
L	Axial foot
F	Rod side flange
G	Head side flange
C	Single clevis
D	Double clevis
T	Centre trunnion

Bore size

160	160 mm
200	200 mm
250	250 mm

Made to Order

Nil	Standard
XA □□	Change of rod end shape
XC6	Stainless steel piston rod and rod-end nut
XC14 □*	Change of trunnion bracket mounting position (Rod side)

* Simple specials part no. except for XC14A or B.

Cylinder stroke
Maximum Stroke

Bore size (mm)	Standard	XC6	XC14
160	2000	1600	2000
200	2000	1600	2000
250	2400	1500	2400

* Please consult with SMC for longer strokes.

Class 2 Pressure Vessel

Series C95 can not be used as the Class 2 Pressure Vessels. If the stroke exceeds the following values, the cylinder with such stroke can not be installed or used in Japan.

Bore size (mm)	Cylinder stroke (mm)
160	1987
200	998
250	813

All other specifications are the same as the standard products Series C95.

Refer to page 69 for applicable auto switches.

Specifications

Bore size (mm)	ø160	ø200	ø250
Action	Double Acting, Single Rod		
Fluid	Air		
Proof pressure	1.5 MPa		
Max. operating pressure	1.0 MPa		
Min. operating pressure	0.05 MPa		
Ambient and fluid temperature	-10 to 60°C (No freezing)		
Lubrication	Not required (Non-lube)		
Piston speed	50 to 500 mm/s		
Stroke tolerance	Up to 250: $^{+1.0}_0$, 251 to 1000: $^{+1.4}_0$, 1001 to 1500: $^{+1.8}_0$ 1501 to 2000: $^{+2.2}_0$, 2001 to 2400: $^{+2.6}_0$		
Cushion	Both ends (Air cushion)		
Port size	G3/4	G3/4	G1
Mounting	Basic, Axial foot, Rod side flange, Head side flange, Single clevis, Double clevis, Centre trunnion		

Mounting Bracket, Mounting Accessories

Description	Bore size	ø160	ø200	ø250
L	Foot	L5160	L5200	L5250
F, G	Flange	F5160	F5200	F5250
C	Single clevis	C5160	C5200	C5250
D	Double clevis	D5160	D5200	D5250
GKM	Rod clevis ⁽²⁾	GKM35-54		GKM40-84
KJ	Piston rod ⁽³⁾ ball joint	KJ36D		KJ42D

Note 1) Accessories for each mounting bracket are as follows.

Foot, Flange, Single clevis: Mounting bolts

Double clevis: Mounting bolts, Clevis pin

Note 2) GKM according to ISO 8140 (Except GKM35-54)

Note 3) KJ according to ISO 8139

ATEX Compliant ISO Cylinder

Standard: Double Acting, Double Rod

Series 55-C95W

ø160, ø200, ø250



CE  II 2GDc 95°C (T5) Ta -10°C to 40°C
115°C (T4) Ta 40°C to 60°C

How to Order

Without magnet 55 - C95S **B** 160 - 100 W - XC6

With magnet 55 - C95SD **B** 160 - 100 W - XC6

ATEX category 2 •

Built-in magnet for auto switch •

Mounting •

B	Basic/without bracket
L	Axial foot
F	Rod side flange
T	Centre trunnion

Bore size •

160	160 mm
200	200 mm
250	250 mm

Made to Order

Nil	Standard
XA□□	Change of rod end shape
XC6	Stainless steel piston rod and rod-end nut (ø32 to ø100)
XC14□*	Change of trunnion bracket mounting position

* Simple specials part no. except for XC14A or B.

Cylinder stroke Maximum Stroke

Bore size (mm)	Standard	XC6	XC14
160	1200	1200	1200
200	1200	1200	1200
250	1200	1200	1200

* Please consult with SMC for longer strokes.

Specifications

Bore size (mm)	ø160	ø200	ø250
Action	Double Acting, Double Rod		
Fluid	Air		
Proof pressure	1.5 MPa		
Max. operating pressure	1.0 MPa		
Min. operating pressure	0.05 MPa		
Ambient and fluid temperature	-10 to 60°C (No freezing)		
Lubrication	Not required (Non-lube)		
Piston speed	50 to 500 mm/s		
Stroke tolerance	Up to 250: $\begin{smallmatrix} +1.0 \\ 0 \end{smallmatrix}$, 251 to 1000: $\begin{smallmatrix} +1.4 \\ 0 \end{smallmatrix}$, 1001 to 1500: $\begin{smallmatrix} +1.8 \\ 0 \end{smallmatrix}$ 1501 to 2000: $\begin{smallmatrix} +2.2 \\ 0 \end{smallmatrix}$, 2001 to 2400: $\begin{smallmatrix} +2.6 \\ 0 \end{smallmatrix}$		
Cushion	Both ends (Air cushion)		
Port size	G3/4	G3/4	G1
Mounting	Basic, Axial foot, Rod side flange, Centre trunnion		

Class 2 Pressure Vessel

Series C95 can not be used as the Class 2 Pressure Vessels. If the stroke exceeds the following values, the cylinder with such stroke can not be installed or used in Japan.

Bore size (mm)	Cylinder stroke (mm)
200	998
250	813

All other specifications are the same as the standard products Series C95W.

Refer to page 69 for applicable auto switches.

Mounting Bracket, Mounting Accessories

Description	Bore size	ø160	ø200	ø250
L	Foot	L5160	L5200	L5250
F	Flange	F5160	F5200	F5250
GKM	Rod clevis ⁽²⁾	GKM35-54		GKM40-84
KJ	Piston rod ⁽³⁾ ball joint	KJ36D		KJ42D

Note 1) Mounting bolts are shipped together for foot style and flange style.

Note 2) GKM according to ISO 8140 (Except GKM35-54)

Note 3) KJ according to ISO 8139

ATEX Compliant ISO Cylinder

Standard: Double Acting, Single Rod

Series 55-C96

ø32, ø40, ø50, ø63, ø80, ø100



CE	II 2GDc	Without magnet	Built-in magnet
		85°C (T5) Ta -20°C to 40°C 105°C (T4) Ta 40°C to 60°C	85°C (T5) Ta -10°C to 40°C 105°C (T4) Ta 40°C to 60°C

For the ø125, refer to page 45-1.

How to Order

Without magnet	55 - C96S	B	32	-	100	C	-	XC68
With magnet	55 - C96SD	B	32	-	100	C	-	XC68

ATEX category 2

Built-in magnet for auto switch

Mounting

B	Basic/without bracket
L	Axial foot
F	Rod side flange
G	Head side flange
C	Single clevis
D	Double clevis
T	Centre trunnion

Bore size

32	32 mm
40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm

Made to Order

Nil	Standard
XA□□	Change of rod end shape
XC4	With heavy duty scraper (ø32 to ø100)
XC7	Tie-rod, cushion valve, tie-rod nut, etc. made of stainless steel
XC14□*	Change of trunnion bracket mounting position
XC22	Fluororubber seals
XC65	Made of Stainless Steel (Combination of XC7 and XC68)
XC68	With chrome plated stainless steel piston rod and stainless steel nut

* Simple specials part no. except for XC14A or B.

Cylinder stroke (mm)

Bore size (mm)	Standard stroke (mm)	Standard max. stroke*	XC65, XC68 Max. stroke
32	25, 50, 80, 100, 125, 160, 200 250, 320, 400, 500	1000	1000
40	25, 50, 80, 100, 125, 160, 200 250, 320, 400, 500	1900	1700
50	25, 50, 80, 100, 125, 160, 200 250, 320, 400, 500, 600	1900	1700
63	25, 50, 80, 100, 125, 160, 200 250, 320, 400, 500, 600	1900	1700
80	25, 50, 80, 100, 125, 160, 200 250, 320, 400, 500, 600, 700, 800	1900	1700
100	25, 50, 80, 100, 125, 160, 200 250, 320, 400, 500, 600, 700, 800	1900	1700

Intermediate strokes are available.

* Please consult with SMC for longer strokes.

All other specifications are the same as the standard products Series C96.
For details, refer to the **WEB catalog** or ISO Cylinder (CAT.P-E10-2).

Refer to page 69 for applicable auto switches.

ATEX Compliant ISO Cylinder

Standard: Double Acting, Single Rod

Series 55-C96

ø125



CE		II 2GDc	Without magnet	Built-in magnet
			85°C (T5) Ta -20°C to 40°C	85°C (T5) Ta -10°C to 40°C
			105°C (T4) Ta 40°C to 60°C	105°C (T4) Ta 40°C to 60°C

For the ø32, ø40, ø50, ø63, ø80, and ø100, refer to page 45.

How to Order

Without magnet	55 - C96S	B	125 - 100 - XC68
With magnet	55 - C96SD	B	125 - 100 - XC68

ATEX category 2

Built-in magnet for auto switch

Mounting

B	Basic/without bracket
L	Axial foot
F	Rod side flange
G	Head side flange
C	Single clevis
D	Double clevis
T	Centre trunnion

Bore size

125	125 mm
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• Made to Order

Nil	Standard
XA□□	Change of rod end shape
XC7	Tie-rod, cushion valve, tie-rod nut, etc. made of stainless steel
XC14□*	Change of trunnion bracket mounting position
XC18	NPT ports
XC22	Fluororubber seals
XC68	With chrome plated stainless steel piston rod and stainless steel nut

* Simple specials part no. except for XC14A or B.

• Cylinder stroke (mm)

Bore size (mm)	Standard max. stroke*	XC68 Max. stroke
125**	2000	1600

Intermediate strokes are available.

* Please consult with SMC for longer strokes.

** ø125 are produced upon receipt of order.

All other specifications are the same as the standard products Series C96.
For details, refer to the **WEB catalog** or ISO Cylinder (CAT.P-E10-2).

Refer to page 69 for applicable auto switches.

ATEX Compliant ISO Cylinder

Standard: Double Acting, Double Rod

Series 55-C96W

ø32, ø40, ø50, ø63, ø80, ø100



CE		II 2GDc	Without magnet	Built-in magnet
			85°C (T5) Ta -20°C to 40°C	85°C (T5) Ta -10°C to 40°C
			105°C (T4) Ta 40°C to 60°C	105°C (T4) Ta 40°C to 60°C

For the ø125, refer to page 46-1.

How to Order

Without magnet	55 - C96S	B	32	-	100	CW	-	XC68
With magnet	55 - C96SD	B	32	-	100	CW	-	XC68

ATEX category 2

Built-in magnet for auto switch

Mounting

B	Basic/without bracket
L	Axial foot
F	Rod side flange
T	Centre trunnion

Bore size

32	32 mm
40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm

Made to Order

Nil	Standard
XA□□	Change of rod end shape
XC4	With heavy duty scraper (ø32 to ø100)
XC7	Tie-rod, cushion valve, tie-rod nut, etc. made of stainless steel
XC14□*	Change of trunnion bracket mounting position
XC22	Fluororubber seals
XC65	Made of Stainless Steel (Combination of XC7 and XC68)
XC68	With chrome plated stainless steel piston rod and stainless steel nut

* Simple specials part no. except for XC14A or B.

Rod

W	Double rod
---	------------

Cylinder stroke (mm)

Bore size (mm)	Standard stroke (mm)	Max. stroke*
32	25, 50, 80, 100, 125, 160, 200 250, 320, 400, 500	1000
40	25, 50, 80, 100, 125, 160, 200 250, 320, 400, 500	1000
50	25, 50, 80, 100, 125, 160, 200 250, 320, 400, 500, 600	1000
63	25, 50, 80, 100, 125, 160, 200 250, 320, 400, 500, 600	1000
80	25, 50, 80, 100, 125, 160, 200 250, 320, 400, 500, 600, 700, 800	1000
100	25, 50, 80, 100, 125, 160, 200 250, 320, 400, 500, 600, 700, 800	1000

Intermediate strokes are available.

* Please consult with SMC for longer strokes.

All other specifications are the same as the standard products Series C96W.
For details, refer to the **WEB catalog** or ISO Cylinder (CAT.P-E10-2).

Refer to page 69 for applicable auto switches.

ATEX Compliant ISO Cylinder

Standard: Double Acting, Double Rod

Series 55-C96W

ø125



CE		II 2GDc	Without magnet	Built-in magnet
			85°C (T5) Ta -20°C to 40°C	85°C (T5) Ta -10°C to 40°C
			105°C (T4) Ta 40°C to 60°C	105°C (T4) Ta 40°C to 60°C

For the ø32, ø40, ø50, ø63, ø80, and ø100, refer to page 46.

How to Order

Without magnet	55 - C96S	B	125 -	100	W -	XC68
With magnet	55 - C96SD	B	125 -	100	W -	XC68

ATEX category 2

Built-in magnet for auto switch

Mounting

B	Basic/without bracket
L	Axial foot
F	Rod side flange
T	Centre trunnion

Bore size

125	125 mm
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Rod

W	Double rod
---	------------

Cylinder stroke (mm)

Bore size (mm)	Max. stroke*
125**	1000

Intermediate strokes are available.

* Please consult with SMC for longer strokes.

** ø125 are produced upon receipt of order.

Made to Order

Nil	Standard
XA□□	Change of rod end shape
XC7	Tie-rod, cushion valve, tie-rod nut, etc. made of stainless steel
XC14□*	Change of trunnion bracket mounting position
XC18	NPT ports
XC22	Fluororubber seals
XC68	With chrome plated stainless steel piston rod and stainless steel nut

* Simple specials part no. except for XC14A or B.

All other specifications are the same as the standard products Series C96W.
For details, refer to the **WEB catalog** or ISO Cylinder (CAT.P-E10-2).

Refer to page 69 for applicable auto switches.

ATEX Compliant ISO Cylinder

Non-rotating Type: Double Acting, Single Rod

Series 55-C96K

Ø32, Ø40, Ø50, Ø63, Ø80, Ø100



CE		II 2GDC	Without magnet	Built-in magnet
			85°C (T5) Ta -20°C to 40°C 105°C (T4) Ta 40°C to 60°C	85°C (T5) Ta -10°C to 40°C 105°C (T4) Ta 40°C to 60°C

How to Order

Without magnet **55 - C96K**

With magnet **55 - C96KD**

ATEX category 2

Built-in magnet for auto switch

Mounting

B	Basic/without bracket
L	Axial foot
F	Rod side flange
G	Head side flange
C	Single clevis
D	Double clevis
T	Centre trunnion

Bore size

32	32 mm
40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm

B 32 - 100 C

B 32 - 100 C

Cylinder stroke (mm)

Bore size (mm)	Maximum stroke (mm)
32	500
40	500
50	600
63	600
80	800
100	800

All other specifications are the same as the standard products Series C96.
For details, refer to the **WEB catalog** or ISO Cylinder (CAT.P-E10-2).

Refer to page 69 for applicable auto switches.

ATEX Compliant ISO Cylinder

Non-rotating Type: Double Acting, Double Rod

Series 55-C96KW

ø32, ø40, ø50, ø63, ø80, ø100



CE		II 2GDc	Without magnet	Built-in magnet
			85°C (T5) Ta -20°C to 40°C 105°C (T4) Ta 40°C to 60°C	85°C (T5) Ta -10°C to 40°C 105°C (T4) Ta 40°C to 60°C

How to Order

Without magnet	55 - C96K	B	32	-	100	CW
With magnet	55 - C96KD	B	32	-	100	CW

ATEX category 2 •

Built-in magnet for auto switch •

Mounting •

B	Basic/without bracket
L	Axial foot
F	Rod side flange
T	Centre trunnion

Bore size •

32	32 mm
40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm

•Rod

W	Double rod
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•Cylinder stroke (mm)

Bore size (mm)	Maximum stroke (mm)
32	500
40	500
50	600
63	600
80	800
100	800

All other specifications are the same as the standard products Series C96W.
For details, refer to **the WEB catalog** or ISO Cylinder (CAT.P-E10-2).

Refer to page 69 for applicable auto switches.

ATEX Compliant ISO Cylinder

Smooth cylinder: Double Acting, Single Rod

Series 55-C96Y

Ø32, Ø40, Ø50, Ø63, Ø80, Ø100, Ø125



II 2GDb

Without magnet

85°C (T5) Ta -20°C to 40°C
105°C (T4) Ta 40°C to 60°C

Built-in magnet

85°C (T5) Ta -10°C to 40°C
105°C (T4) Ta 40°C to 60°C

How to Order

Without magnet	55 - C96Y	B	32	-	100
With magnet	55 - C96YD	B	32	-	100

ATEX category 2

Built-in magnet for auto switch

Mounting

B	Basic/without bracket
L	Axial foot
F	Rod side flange
G	Head side flange
C	Single clevis
D	Double clevis
T	Centre trunnion

Bore size

32	32 mm
40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm
125	125 mm

Cylinder stroke (mm)

Bore size (mm)	Maximum stroke (mm)
32	800
40	800
50	1000
63	1000
80	1000
100	1000
125	1000

All other specifications are the same as the standard products Series C96.
For details, refer to the **WEB catalog** or ISO Cylinder (CAT.P-E10-2).

Refer to page 69 for applicable auto switches.

ATEX Compliant ISO Cylinder

Standard: Double Acting, Single Rod

Series 55-CP96

ø32, ø40, ø50, ø63, ø80, ø100



CE		II 2GDC	Without magnet	Built-in magnet
			85°C (T5) Ta -20°C to 40°C	85°C (T5) Ta -10°C to 40°C
			105°C (T4) Ta 40°C to 60°C	105°C (T4) Ta 40°C to 60°C

For the ø125, refer to page 50-1.

How to Order

Without magnet	55 - CP96S	B	32	-	100	C	-	XC68
With magnet	55 - CP96SD	B	32	-	100	C	-	XC68

ATEX category 2

Built-in magnet for auto switch

Mounting

B	Basic/without bracket
L	Axial foot
F	Rod side flange
G	Head side flange
C	Single clevis
D	Double clevis

Bore size

32	32 mm
40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm

Cylinder stroke (mm)

Bore size (mm)	Standard stroke (mm)	Max. stroke*	XC65, XC68 Max. stroke
32	25, 50, 80, 100, 125, 160, 200 250, 320, 400, 500	2000	1800
40	25, 50, 80, 100, 125, 160, 200 250, 320, 400, 500	2000	1700
50	25, 50, 80, 100, 125, 160, 200 250, 320, 400, 500, 600	2000	1700
63	25, 50, 80, 100, 125, 160, 200 250, 320, 400, 500, 600	2000	1700
80	25, 50, 80, 100, 125, 160, 200 250, 320, 400, 500, 600, 700, 800	2000	1700
100	25, 50, 80, 100, 125, 160, 200 250, 320, 400, 500, 600, 700, 800	2000	1700

Intermediate strokes are available.

* Please consult with SMC for longer strokes.

Made to Order

Nil	Standard
XA□□	Change of rod end shape
XC4	With heavy duty scraper (ø32 to ø100)
XC7	Tie-rod, cushion valve, tie-rod nut, etc. made of stainless steel
XC22	Fluororubber seals
XC65	Made of Stainless Steel (Combination of XC7 and XC68)
XC68	With chrome plated stainless steel piston rod and stainless steel nut

All other specifications are the same as the standard products Series CP96.
For details, refer to the **WEB catalog** or ISO Cylinder (CAT.P-E10-2).

Refer to page 69 for applicable auto switches.

ATEX Compliant ISO Cylinder

Standard: Double Acting, Single Rod

Series 55-CP96

ø125



CE		II 2GDC	Without magnet	Built-in magnet
			85°C (T5) Ta -20°C to 40°C	85°C (T5) Ta -10°C to 40°C
			105°C (T4) Ta 40°C to 60°C	105°C (T4) Ta 40°C to 60°C

For the ø32, ø40, ø50, ø63, ø80, and ø100, refer to page 50.

How to Order

Without magnet	55 - CP96S	B	125	-	100	-	XC68
With magnet	55 - CP96SD	B	125	-	100	-	XC68

ATEX category 2

Built-in magnet for auto switch

Mounting

B	Basic/without bracket
L	Axial foot
F	Rod side flange
G	Head side flange
C	Single clevis
D	Double clevis

Bore size

125	125 mm
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Cylinder stroke (mm)

Bore size (mm)	Max. stroke*	XC68 Max. stroke
125**	2000	1600

Intermediate strokes are available.

* Please consult with SMC for longer strokes.

** ø125 are produced upon receipt of order.

Made to Order

Nil	Standard
XA□□	Change of rod end shape
XC7	Tie-rod, cushion valve, tie-rod nut, etc. made of stainless steel
XC18	NPT ports
XC22	Fluororubber seals
XC68	With chrome plated stainless steel piston rod and stainless steel nut

All other specifications are the same as the standard products Series CP96.
For details, refer to the **WEB catalog** or ISO Cylinder (CAT.P-E10-2).

Refer to page 69 for applicable auto switches.

ATEX Compliant ISO Cylinder

Standard: Double Acting, Double Rod

Series 55-CP96W

Ø32, Ø40, Ø50, Ø63, Ø80, Ø100



CE	II 2GDc	Without magnet	Built-in magnet
		85°C (T5) Ta -20°C to 40°C 105°C (T4) Ta 40°C to 60°C	85°C (T5) Ta -10°C to 40°C 105°C (T4) Ta 40°C to 60°C

For the Ø125, refer to page 51-1.

How to Order

Without magnet	55 - CP96S	B	32	-	100	CW	-	XC68
With magnet	55 - CP96SD	B	32	-	100	CW	-	XC68

ATEX category 2

Built-in magnet for auto switch

Mounting

B	Basic/without bracket
L	Axial foot
F	Rod side flange

Bore size

32	32 mm
40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm

Made to Order

Nil	Standard
XA□□	Change of rod end shape
XC4	With heavy duty scraper (Ø32 to Ø100)
XC7	Tie-rod, cushion valve, tie-rod nut, etc. made of stainless steel
XC22	Fluororubber seals
XC65	Made of Stainless Steel (Combination of XC7 and XC68)
XC68	With chrome plated stainless steel piston rod and stainless steel nut

Rod

W	Double rod
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Cylinder stroke (mm)

Bore size (mm)	Standard stroke (mm)	Max. stroke*
32	25, 50, 80, 100, 125, 160, 200 250, 320, 400, 500	1000
40	25, 50, 80, 100, 125, 160, 200 250, 320, 400, 500	1000
50	25, 50, 80, 100, 125, 160, 200 250, 320, 400, 500, 600	1000
63	25, 50, 80, 100, 125, 160, 200 250, 320, 400, 500, 600	1000
80	25, 50, 80, 100, 125, 160, 200 250, 320, 400, 500, 600, 700, 800	1000
100	25, 50, 80, 100, 125, 160, 200 250, 320, 400, 500, 600, 700, 800	1000

Intermediate strokes are available.

* Please consult with SMC for longer strokes

All other specifications are the same as the standard products Series CP96W.
For details, refer to the **WEB catalog** or ISO Cylinder (CAT.P-E10-2).

Refer to page 69 for applicable auto switches.

ATEX Compliant ISO Cylinder

Standard: Double Acting, Double Rod

Series 55-CP96W

Ø125



CE	II 2GDc	Without magnet	Built-in magnet
		85°C (T5) Ta -20°C to 40°C 105°C (T4) Ta 40°C to 60°C	85°C (T5) Ta -10°C to 40°C 105°C (T4) Ta 40°C to 60°C

For the Ø32, Ø40, Ø50, Ø63, Ø80, and Ø100, refer to page 51.

How to Order

Without magnet	55 - CP96S	B	125 -	100	W -	XC68
With magnet	55 - CP96SD	B	125 -	100	W -	XC68

ATEX category 2

Built-in magnet for auto switch

Mounting

B	Basic/without bracket
L	Axial foot
F	Rod side flange

Bore size

125	125 mm
-----	--------

Made to Order

Nil	Standard
XA□□	Change of rod end shape
XC7	Tie-rod, cushion valve, tie-rod nut, etc. made of stainless steel
XC18	NPT ports
XC22	Fluororubber seals
XC68	With chrome plated stainless steel piston rod and stainless steel nut

Rod

W	Double rod
---	------------

Cylinder stroke (mm)

Bore size (mm)	Max. stroke*
125**	1000

Intermediate strokes are available.

* Please consult with SMC for longer strokes.

** Ø125 are produced upon receipt of order.

All other specifications are the same as the standard products Series CP96W.
For details, refer to the **WEB catalog** or ISO Cylinder (CAT.P-E10-2).

Refer to page 69 for applicable auto switches.

ATEX Compliant ISO Cylinder

Non-rotating Type: Double Acting, Single Rod

Series 55-CP96K

Ø32, Ø40, Ø50, Ø63, Ø80, Ø100



CE		II 2GDc	Without magnet	Built-in magnet
			85°C (T5) Ta -20°C to 40°C 105°C (T4) Ta 40°C to 60°C	85°C (T5) Ta -10°C to 40°C 105°C (T4) Ta 40°C to 60°C

How to Order

Without magnet **55 - CP96K** **B** **32** - **100** **C**

With magnet **55 - CP96KD** **B** **32** - **100** **C**

ATEX category 2

Built-in magnet for auto switch

Mounting

B	Basic/without bracket
L	Axial foot
F	Rod side flange
G	Head side flange
C	Single clevis
D	Double clevis

Bore size

32	32 mm
40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm

Cylinder stroke (mm)

Bore size (mm)	Maximum stroke (mm)
32	500
40	500
50	600
63	600
80	800
100	800

All other specifications are the same as the standard products Series CP96.
For details, refer to **the WEB catalog** or ISO Cylinder (CAT.P-E10-2).

Refer to page 69 for applicable auto switches.

ATEX Compliant ISO Cylinder

Non-rotating Type: Double Acting, Double Rod

Series 55-CP96KW

Ø32, Ø40, Ø50, Ø63, Ø80, Ø100



CE		II 2GDC	Without magnet	Built-in magnet
			85°C (T5) Ta -20°C to 40°C	85°C (T5) Ta -10°C to 40°C
			105°C (T4) Ta 40°C to 60°C	105°C (T4) Ta 40°C to 60°C

How to Order

Without magnet	55 - CP96K	B	32	-	100	CW
With magnet	55 - CP96KD	B	32	-	100	CW

ATEX category 2 •

Built-in magnet for auto switch •

Mounting •

B	Basic/without bracket
L	Axial foot
F	Rod side flange

Bore size •

32	32 mm
40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm

• Rod

W	Double rod
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• Cylinder stroke (mm)

Bore size (mm)	Maximum stroke (mm)
32	500
40	500
50	600
63	600
80	800
100	800

All other specifications are the same as the standard products Series CP96W.
For details, refer to **the WEB catalog** or ISO Cylinder (CAT.P-E10-2).

Refer to page 69 for applicable auto switches.

ATEX Compliant ISO Standards

Compact Cylinder/Standard type: Double acting, Single rod

Series 55-C55

Ø20, Ø25, Ø32, Ø40, Ø50, Ø63, Ø80, Ø100



II 2GDc

85°C(T6) Ta -10°C to 40°C
105°C(T4) Ta 40°C to 60°C

How to Order

Without magnet

55 - C55 B 20 - 10

With magnet

55 - CD55 B 20 - 10

ATEX category 2

Built-in magnet for auto switch

Mounting

B	Through-hole/Both ends tapped common (Standard)
L	Foot
F	Rod side flange
G	Head side flange
C	Single clevis

Bore size

20	20 mm
25	25 mm
32	32 mm
40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm

Body option

Nil	Standard (Rod end female thread)
M	Rod end male thread

Cylinder stroke (mm)

Bore size (mm)	Standard stroke (mm)
20 to 63	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 60, 80, 100, 125, 150
80, 100	10, 15, 20, 25, 30, 35, 40, 45, 50, 60, 80, 100, 125

All other specifications are the same as the standard products Series C55. For details, refer to the **WEB catalog** or ISO Cylinder (CAT.P-E10-2).

Refer to page 69 for applicable auto switches.

ATEX Compliant

Air Cylinder/Standard type: Double acting, Single rod

Series 55-CG1

ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100



CE  II 2GDc 95°C (T5) Ta -10°C to 40°C
115°C (T4) Ta 40°C to 60°C

How to Order

Without magnet **55-CG1** **L** **N** **25** **100** **-XC85**

With magnet **55-CDG1** **L** **N** **25** **100** **-XC85**

ATEX category 2

Built-in magnet for auto switch

Mounting

B	Basic
L	Axial foot
F	Rod side flange
G	Head side flange
U*	Rod side trunnion
T*	Head side trunnion
D	Clevis

* Not available for ø80 or ø100.
Note) Mounting brackets are shipped together, (but not assembled).

Type

N	Rubber cushion
A	Air cushion

Bore size

20	20 mm	50	50 mm
25	25 mm	63	63 mm
32	32 mm	80	80 mm
40	40 mm	100	100 mm

Port thread type

Rubber cushion		
Nil	Rc	ø20 to ø100
TN	NPT	ø20 to ø100
TF	M5 x 0.8	ø20, ø25
	G	ø32 to ø100

Air cushion

Nil	M5 x 0.8	ø20, ø25
	Rc	ø32 to ø100
TN	M5 x 0.8	ø20, ø25
	NPT	ø32 to ø100
TF	M5 x 0.8	ø20, ø25
	G	ø32 to ø100

Made to Order

Nil	Standard
XC85	Food grade grease
XC10 Note 1)	Dual stroke cylinder/Double rod
XC11 Note 1) 2)	Dual stroke cylinders/Single rod

Note 1) "How to Order" for XC10, and XC11 are different from the above. Refer to "How to Order" in Best Pneumatics No. 2.

Note 2) Not available for rubber cushion type.

Note 3) XC10 and XC11 are not applicable to XC85.

Cylinder stroke (mm)

Bore size (mm)	Standard stroke Note 1) (mm)	Long stroke Note 2) (mm)
20	25, 50, 75, 100, 125, 150, 200	201 to 350
25		301 to 400
32		301 to 450
40	25, 50, 75, 100, 125, 150, 200, 250, 300	301 to 800
50, 63		301 to 1200
80		301 to 1400
100		301 to 1500

Note 1) Manufacture of intermediate strokes at 1 mm intervals is possible. (Spacers are not used.)

Note 2) Long stroke is compatible with the axial foot and rod side flange types. When other mounting brackets are used or the long stroke exceeds the limit, the allowable maximum stroke length is determined using the stroke selection table (Best Pneumatics No. 2).

All other specifications are the same as the standard products Series CG1. For details, refer to the **WEB catalog** or Best Pneumatics No. 2.

Refer to page 69 for applicable auto switches.

ATEX Compliant

Air Cylinder/Standard type: Double acting, Double rod

Series 55-CG1W

ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100



CE  II 2GDc 95°C (T5) Ta -10°C to 40°C
115°C (T4) Ta 40°C to 60°C

How to Order

Without magnet **55-CG1 W L N 25** - **100** - **XC85**

With magnet **55-CDG1W L N 25** - **100** - **XC85**

ATEX category 2

Built-in magnet for auto switch

Double Acting/Double Rod

Mounting

B	Basic
L	Axial foot
F	Flange
U*	Centre trunnion

* Not available for bore size ø80 and ø100.
Note) Mounting brackets are shipped together, (but not assembled).

Type

N	Rubber cushion
A	Air cushion

Bore size

20	20 mm	50	50 mm
25	25 mm	63	63 mm
32	32 mm	80	80 mm
40	40 mm	100	100 mm

Port thread type

Rubber cushion

Nil	Rc	ø20 to ø100
TN	NPT	ø20 to ø100
TF	M5 x 0.8	ø20, ø25
	G	ø32 to ø100

Air cushion

Nil	M5 x 0.8	ø20, ø25
	Rc	ø32 to ø100
TN	M5 x 0.8	ø20, ø25
	NPT	ø32 to ø100
TF	M5 x 0.8	ø20, ø25
	G	ø32 to ø100

Cylinder stroke (mm)

Bore size (mm)	Standard stroke ^{Note 1)} (mm)	Long stroke (mm)
20	25, 50, 75, 100, 125, 150, 200	201 to 350
25	25, 50, 75, 100, 125, 150, 200 250, 300	301 to 400
32		301 to 450
40		301 to 800
50, 63		301 to 1200
80		301 to 1400
100		301 to 1500

Note 1) Manufacture of intermediate strokes at 1 mm intervals is possible. (Spacers are not used.)

Note 2) Long stroke is compatible with the axial foot and rod side flange types. When other mounting brackets are used or the long stroke exceeds the limit, the allowable maximum stroke length is determined using the stroke selection table (Best Pneumatics No. 2).

All other specifications are the same as the standard products Series CG1W. For details, refer to the **WEB catalog** or Best Pneumatics No. 2.

Refer to page 69 for applicable auto switches.

ATEX Compliant

Air Cylinder/Standard type: Non-lube

Series 55-CS1



Non-lube type: Ø125, Ø140, Ø160, Ø180, Ø200, Ø250, Ø300

CE  II 2GDc 95°C (T5) Ta 0°C to 40°C
115°C (T4) Ta 40°C to 60°C

How to Order

55-CS1 L N 160-300

ATEX category 2

Mounting

B	Basic
L	Foot
F	Rod side flange
G	Head side flange
C	Single clevis
D	Double clevis
T	Centre trunnion

Cushion

Cushion	N	Without cushion
	R	With cushion in rod side
	H	With cushion in head side
	Nil	With cushion in both sides

* If specifying more than one symbol, indicate them alphabetically.

Tubing material

Symbol	Bore size (mm)	Tubing material	Stroke range (mm)
Nil	125, 140	Aluminum	1000 or less
	160		1200 or less
	125, 140	Steel	1001 or more
	160		1201 or more
F	180 to 300	Steel	All strokes
	125, 140		1000 or less
	160		1200 or less

Bore size

Non-lube type	
125	125 mm
140	140 mm
160	160 mm
180	180 mm
200	200 mm
250	250 mm
300	300 mm

Type

N	Non-lube type
----------	---------------

Cylinder stroke (mm)

Tubing material		Aluminum	Steel	
Bore size	Mounting bracket	Basic, Head side flange, Single clevis, Double clevis, Centre trunnion, Foot, Rod side flange	Basic, Head side flange, Single clevis, Double clevis, Centre trunnion	Foot Rod side flange
125		1000 or less	1000 or less	1600 or less
140		1000 or less	1200 or less	1600 or less
160		1200 or less	1200 or less	1600 or less
180		—	1200 or less	2000 or less
200		—	1200 or less	2000 or less
250		—	1200 or less	2400 or less
300		—	1200 or less	2400 or less

Class 2 Pressure Vessel

The cylinder with a stroke exceeding the level shown below that is applicable to the Class 2 Pressure Vessel Act cannot be installed or used in Japan.

Bore size (mm)	Cylinder stroke (mm)
200	998
250	813
300	564

All other specifications are the same as the standard products Series CS1. For details, refer to **the WEB catalog** or Best Pneumatics No. 2.

Refer to page 69 for applicable auto switches.

ATEX Compliant

Air cylinder

Series 55-CDS1

Ø125, Ø140, Ø160, Ø180, Ø200



CE  II 2GDc 95°C (T5) Ta 0°C to 40°C
115°C (T4) Ta 40°C to 60°C

How to Order

With magnet

55 - CDS1 L N 160 - 300

ATEX category 2

Built-in magnet for auto switch

Mounting

B	Basic
L	Foot
F	Rod side flange
G	Head side flange
C	Single clevis
D	Double clevis
T	Centre trunnion

Type

N	Non-lube type
----------	---------------

Bore size

Non-lube type	
125	125 mm
140	140 mm
160	160 mm
180	180 mm
200	200 mm

Cushion

Cushion	N	Without cushion
	R	With cushion in rod side
	H	With cushion in head side
	Nil	With cushion in both sides

* If specifying more than one symbol, indicate them alphabetically.

Cylinder stroke (mm)

Bore size (mm)	Maximum Stroke	
	Basic, Head side flange, Single clevis, Double clevis, Centre trunnion	Foot, Rod side flange
125, 140	1000 or less	1400 or less
160	1200 or less	1400 or less
180	1200 or less	1500 or less
200	1200 or less	1200 or less

Class 2 Pressure Vessel

The cylinder with a stroke exceeding the level shown below that is applicable to the Class 2 Pressure Vessel Act cannot be installed or used in Japan.

Bore size (mm)	Cylinder stroke (mm)
200	998

All other specifications are the same as the standard products Series CS1. For details, refer to the **WEB catalog** or Best Pneumatics No. 2.

Refer to page 69 for applicable auto switches.

ATEX Compliant

Air Cylinder: Double Rod Type

Series 55-CS1W



Non-lube type: Ø125, Ø140, Ø160, Ø180, Ø200, Ø250, Ø300

CE  II 2GDc 95°C (T5) Ta 0°C to 40°C
115°C (T4) Ta 40°C to 60°C

How to Order

Without magnet

55-CS1 W L N 125-100

With magnet

55-CDS1W L N 125-100

ATEX category 2

Built-in magnet for auto switch

Double rod

Mounting

B	Basic
L	Foot
F	Rod side flange
T	Centre trunnion

Tubing material

Symbol	Bore size (mm)	Tubing material
Nil	125, 140	Aluminum
	160	
	180	Steel
	200	
F	250, 300	Steel
	125, 140	
	160	

Bore size

Non-lube type	
125	125 mm
140	140 mm
160	160 mm
180	180 mm
200	200 mm
250*	250 mm
300*	300 mm

* It is not available with auto switch.

Type

N	Non-lube type
---	---------------

Cushion

Cushion	N	Without cushion
	R	With cushion in rod side
	H	With cushion in head side
	Nil	With cushion in both sides

* If specifying more than one symbol, indicate them alphabetically.

Cylinder stroke (mm)

Tubing material	Aluminum		Steel
	Without magnet	With magnet	Without magnet
Bore size (mm)	Mounting bracket: Basic, Foot, Rod side flange, Centre trunnion		
125, 140	1000 or less	1000 or less	1000 or less
160	1200 or less	1200 or less	1200 or less
180	—	1200 or less	1200 or less
200	—	1200 or less	1200 or less
250, 300	—	—	1200 or less

Class 2 Pressure Vessel

The cylinder with a stroke exceeding the level shown below that is applicable to the Class 2 Pressure Vessel Act cannot be installed or used in Japan.

Bore size (mm)	Cylinder stroke (mm)
200	998
250	813
300	564

All other specifications are the same as the standard products Series CS1W. For details, refer to the **WEB catalog** or Best Pneumatics No. 2.

Refer to page 69 for applicable auto switches.

ATEX Compliant

Compact Cylinder/Standard type: Double acting, Single rod

Series 55-CQ2

ø12, ø16, ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100



CE II 2GDc 85°C (T6) Ta -10°C to 40°C
105°C (T4) Ta 40°C to 60°C

How to Order

Without magnet ø12 to ø25	55 - CQ2	B	20		-	30	D		-	
Without magnet ø32 to ø100	55 - CQ2	B	32		-	30	D		Z	
With magnet	55 - CDQ2	B	32		-	30	D		Z	

ATEX category 2

With magnet
(Built-in magnet)

Mounting bracket

B	Through-hole (Standard)
A	Both ends tapped
L	Foot
F	Rod side flange
G	Head side flange
D	Double clevis

* Mounting brackets are shipped together, (but not assembled).
* Cylinder mounting bolts are not included.

Bore size

12	12 mm
16	16 mm
20	20 mm
25	25 mm
32	32 mm
40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm

Port thread type

Nil	M thread	ø12 to ø25
	Rc	ø32 to ø100
TF	G	

* For cylinders without magnet, M threads are compatible only with ø32-5 mm stroke.

Made to Order

Nil	Standard
XC85	With food grade grease

Auto switch mounting groove

Z	ø12 to ø25	2 surfaces
	ø32 to ø100	4 surfaces

Body option

Nil	Standard (Rod end female thread)
C	With rubber bumper
M	Rod end male thread

* Combination of body options (CM) is available.

Action

D	Double acting
---	---------------

Cylinder stroke (mm)

Bore size	Standard stroke
12, 16	5, 10, 15, 20, 25, 30
20, 25	5, 10, 15, 20, 25, 30, 35, 40, 45, 50
32, 40	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100
50 to 100	10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100

Note) For intermediate strokes, refer to the standard products Series CQ2.

All other specifications are the same as the standard products Series CQ2. For details, refer to the **WEB catalog** or Best Pneumatics No. 2.

Refer to page 69 for applicable auto switches.

ATEX Compliant

Compact Cylinder/Standard type: Double Acting, Double Rod

Series 55-CQ2W

ø12, ø16, ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100



CE  II 2GDa 85°C (T6) Ta -10°C to 40°C
105°C (T4) Ta 40°C to 60°C

How to Order

Without magnet ø12 to ø25 55 - CQ2W **B** **20** - **30** **D** -

Without magnet ø32 to ø100 55 - CQ2W **B** **32** - **30** **D** **Z** -

With magnet 55 - CDQ2W **B** **32** - **30** **D** **Z** -

ATEX category 2

With magnet
(Built-in magnet)

Mounting bracket

B	Through-hole (Standard)
A	Both ends tapped
L	Foot
F	Flange

* Mounting brackets are shipped together, (but not assembled).
* Cylinder mounting bolts are not included.

Bore size

12	12 mm
16	16 mm
20	20 mm
25	25 mm
32	32 mm
40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm

Port thread type

Nil	M thread	ø12 to ø25
	Rc	ø32 to ø100
TF	G	

* For cylinders without magnet, M threads are compatible only with ø32-5 mm stroke.

Made to Order

Nil	Standard
XC85	With food grade grease

Auto switch mounting groove

Z	ø12 to ø25	2 surfaces
	ø32 to ø100	4 surfaces

Body option

Nil	Standard (Rod end female thread)
C	With rubber bumper
M	Rod end male thread

* Combination of body options (CM) is available.

Action

D	Double acting
----------	---------------

Cylinder stroke (mm)

Bore size	Standard stroke
12, 16	5, 10, 15, 20, 25, 30
20, 25	5, 10, 15, 20, 25, 30, 35, 40, 45, 50
32, 40	5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100
50 to 100	10, 15, 20, 25, 30, 35, 40, 45, 50, 75, 100

All other specifications are the same as the standard products Series CQ2.
For details, refer to the **WEB catalog** or Best Pneumatics No. 2.

Refer to page 69 for applicable auto switches.

ATEX Compliant

Compact Cylinder: Long Stroke/Double Acting, Single Rod

Series 55-CQ2

ø32, ø40, ø50, ø63, ø80, ø100



CE  II 2GDc 85°C (T6) Ta -10°C to 40°C
105°C (T4) Ta 40°C to 60°C

How to Order

Without magnet	55 - CQ2	A	32		-200	DC		Z	
With magnet	55 - CDQ2	A	32		-200	DC		Z	

ATEX category 2 •

Built-in magnet for auto switch •

Mounting bracket •

A	Both ends tapped
L	Foot
F	Rod side flange
G	Head side flange
D	Double clevis

* Mounting brackets are shipped together, (but not assembled).

Bore size •

32	32 mm
40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm

Port thread type •

Nil	Rc
TF	G

Made to Order

Nil	Standard
XC85	With food grade grease

Auto switch mounting groove

Z 4 surfaces

Body option

Nil	Standard (Rod end female thread)
M	Rod end male thread

Cushion

C Rubber cushion

Action

D Double acting

Cylinder stroke (mm)

Bore size	Standard stroke
32, 40, 50	125, 150, 175, 200, 250, 300
63, 80, 100	

All other specifications are the same as the standard products Series CQ2.
For details, refer to **the WEB catalog** or Best Pneumatics No. 2.

Refer to page 69 for applicable auto switches.

ATEX Compliant

Compact Cylinder: Large Bore Size/Double Acting, Single Rod

Series 55-CQ2

Ø125, Ø140, Ø160, Ø180, Ø200



CE  II 2GDc 85°C (T6) Ta -10°C to 40°C
105°C (T4) Ta 40°C to 60°C

How to Order

Without magnet 55 - CQ2B 125 - 30 DC Z -

With magnet 55 - CDQ2B 125 - 30 DC Z -

ATEX category 2

Built-in magnet for auto switch

Mounting bracket

B	Standard (Through-hole/Both ends tapped common)
----------	---

* Cylinder mounting bolts are not included.

Bore size

125	125 mm
140	140 mm
160	160 mm
180	180 mm
200	200 mm

Port thread type

Nil	Rc
TF	G

Made to Order

Nil	Standard
XC85	With food grade grease

Auto switch mounting groove

Z	4 surfaces
----------	------------

Body option

Nil	Standard (Rod end female thread)
M	Rod end male thread

Cushion

C	Rubber cushion
----------	----------------

Action

D	Double acting
----------	---------------

Cylinder stroke (mm)

Bore size	Standard stroke
125, 140, 160	10, 20, 30, 40, 50, 75, 100
180, 200	125, 150, 175, 200, 250, 300

All other specifications are the same as the standard products Series CQ2.
For details, refer to **the WEB catalog** or Best Pneumatics No. 2.

Refer to page 69 for applicable auto switches.

ATEX Compliant

Dual Rod Cylinder/Basic Type

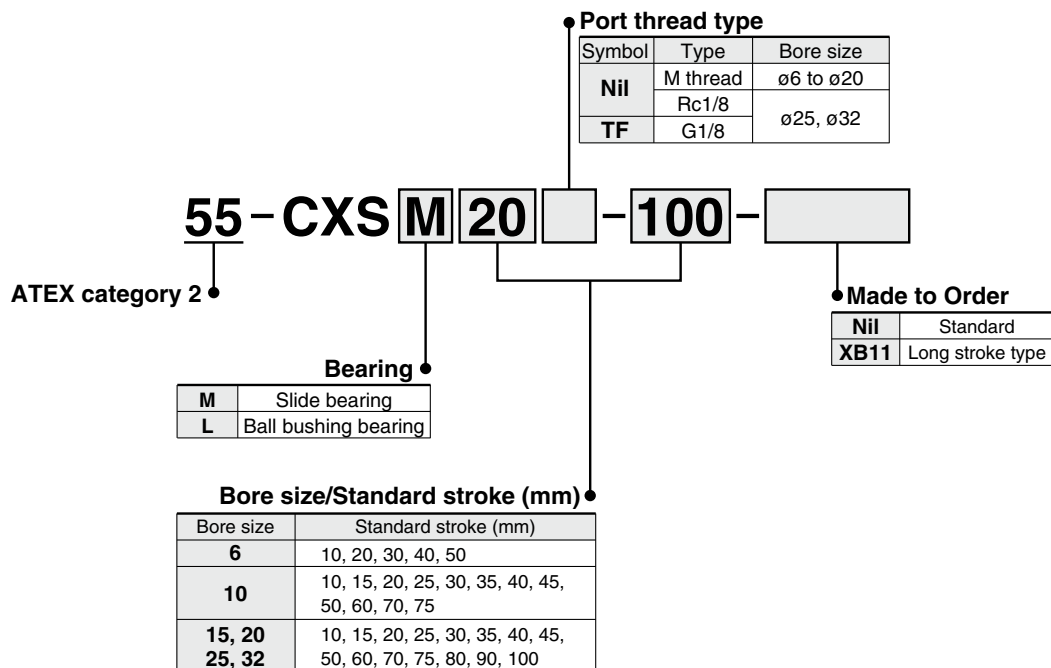
Series 55-CXS

ø6, ø10, ø15, ø20, ø25, ø32



CE  II 2GDc 65°C (T6) Ta -10°C to 40°C
85°C (T6) Ta 40°C to 60°C

How to Order



All other specifications are the same as the standard products Series CXS.
For details, refer to the **WEB catalog** or Best Pneumatics No. 3.

Refer to page 69 for applicable auto switches.

ATEX Compliant

Dual Rod Cylinder/Double Rod Type

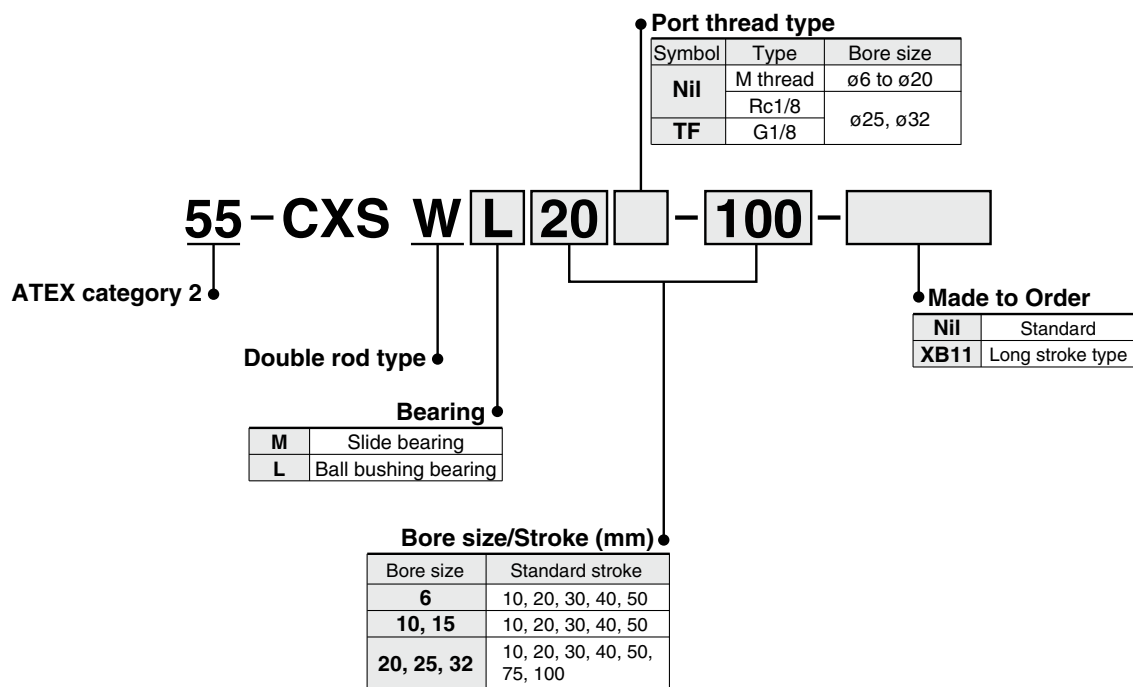
Series 55-CXSW

ø6, ø10, ø15, ø20, ø25, ø32



CE  II 2GDc 65°C (T6) Ta -10°C to 40°C
85°C (T6) Ta 40°C to 60°C

How to Order



All other specifications are the same as the standard products Series CXS.
For details, refer to **the WEB catalog** or Best Pneumatics No. 3.

Refer to page 69 for applicable auto switches.

ATEX Compliant

Mechanically Jointed Rodless Cylinder/Basic Type

Series 55-MY1B

ø10, ø16, ø20, ø25, ø32, ø40, ø50, ø63, ø80, ø100



II 2Gc

75°C (T6) Ta 5°C to 40°C
95°C (T5) Ta 40°C to 60°C

How to Order

Basic

55-MY1B **20** **300**

ATEX category 2

Basic

• Made to Order

Nil	Standard type
XB11	Long stroke type

Bore size

10	10 mm
16	16 mm
20	20 mm
25	25 mm
32	32 mm
40	40 mm
50	50 mm
63	63 mm
80	80 mm
100	100 mm

• Cylinder stroke (mm)

Bore size (mm)	Standard stroke* (mm)	Maximum stroke (mm)
10, 16	100, 200, 300, 400, 500, 600	3000
20, 25, 32, 40 50, 63, 80, 100	700, 800, 900, 1000, 1200 1400, 1600, 1800, 2000	5000

* Strokes are manufacturable in 1 mm increments, up to the maximum stroke. However, when exceeding a 2000 mm stroke, specify "-XB11" at the end of the model number.
With strokes of 49 mm or less, the air cushion capacity may decrease and it may not be possible to mount multiple auto switches.

Port thread type

Symbol	Type	Bore size
Nil	M thread	ø10, ø16, ø20
	Rc	ø25, ø32, ø40, ø50, ø63, ø80, ø100
TN	NPT	
TF	G	

Piping

Nil	Standard
G	Centralized piping type

Note) For ø10, only G is available.

All other specifications are the same as the standard products Series MY1B. For details, refer to the **WEB catalog** or Best Pneumatics No. 2.

Refer to page 69 for applicable auto switches.

ATEX Compliant

Mechanically Jointed Rodless Cylinder/Slide Bearing Guide Type

Series 55-MY1M

ø16, ø20, ø25, ø32, ø40, ø50, ø63



II 2Gc

75°C (T6) Ta 5°C to 40°C
95°C (T5) Ta 40°C to 60°C

How to Order

Slide bearing guide type **55 - MY1M** **20** **G** - **300** -

ATEX category 2

Slide bearing guide type

Bore size

16	16 mm
20	20 mm
25	25 mm
32	32 mm
40	40 mm
50	50 mm
63	63 mm

Port thread type

Symbol	Type	Bore size
Nil	M thread	ø16, ø20
	Rc	ø25, ø32,
TN	NPT	ø40, ø50,
TF	G	ø63

Piping

Nil	Standard
G	Centralized piping type

Cylinder stroke (mm)

Bore size (mm)	Standard stroke* (mm)	Maximum stroke (mm)
16	100, 200, 300, 400, 500, 600, 700	3000
20, 25, 32 40, 50, 63	800, 900, 1000, 1200, 1400, 1600 1800, 2000	5000

* Strokes are manufacturable in 1 mm increments, up to the maximum stroke. However, when exceeding a 2000 mm stroke, specify "-XB11" at the end of the model number. With strokes of 49 mm or less, the air cushion capacity may decrease and it may not be possible to mount multiple auto switches.

• Made to Order

Nil	Standard type
XB11	Long stroke type

All other specifications are the same as the standard products Series MY1M. For details, refer to the **WEB catalog** or Best Pneumatics No. 2.

Refer to page 69 for applicable auto switches.

ATEX Compliant**Mechanically Jointed Rodless Cylinder/Linear Guide Type****Series 55-MY1H****ø10, ø16, ø20, ø25, ø32, ø40**

II 2Gc

75°C (T6) Ta 5°C to 40°C
95°C (T5) Ta 40°C to 60°C**How to Order****Linear guide type****55-MY1H 25** - **300** -

ATEX category 2

Linear guide type

Bore size

10	10 mm
16	16 mm
20	20 mm
25	25 mm
32	32 mm
40	40 mm

Port thread type

Symbol	Type	Bore size
Nil	M thread	ø10, ø16, ø20
	Rc	
TN	NPT	ø25, ø32, ø40
TF	G	

Piping

Nil	Standard
G	Centralized piping type

(Note) For ø10, only G is available.

• Made to Order

Nil	Standard type
XB10	Intermediate stroke (using exclusive body)
XB11	Long stroke type

• Cylinder stroke (mm)

Bore size (mm)	Standard stroke* (mm)	Maximum stroke (mm)
10, 16, 20	50, 100, 150, 200, 250, 300	1000
25, 32, 40	350, 400, 450, 500, 550, 600	1500

* Strokes are manufacturable from 50 mm in 1 mm increments, up to the maximum stroke. However, add "-XB10" to the end of the part number for nonstandard strokes from 51 to 599. Also when exceeding a 600 mm stroke, specify "-XB11" at the end of the model number. (Except ø10)

All other specifications are the same as the standard products Series MY1H. For details, refer to **the WEB catalog** or Best Pneumatics No. 2.

Refer to page 69 for applicable auto switches.

Linear guide type**55-MY1H 25** - **300** - **X1985**

ATEX category 2

Linear guide type

Bore size

25	25 mm
32	32 mm
40	40 mm

Port thread type

Symbol	Type	Bore size
Nil	Rc	ø25 to ø40
TN	NPT	
TF	G	

• Piping

Nil	Standard
G	Centralized piping type

• Rust proof guide

• Cylinder stroke (mm)

Bore size (mm)	Standard stroke* (mm)
25	50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600, 750
32	
40	

* X1985 type can only be manufactured with the strokes listed in table.

Auto Switch Applicable Cylinder List

Model Switch type	55- C76	55- C85	55- C95	55- C96	55- CP96	55- C55	55- CG1	55- CS1	55- CQ2(Z)	55- CXSW	55- MY1B	55- MY1M	55- MY1H	56- CRB1	56- CRB2	56- CRBU2	55- CRQ2
D-M9□-588	●	Note 1) ●		●	●	●	● (20 to 63)	● (125 to 200)	●		● (Except 50)	●	●				●
D-M9□V-588		Note 2) ●		●	●	●		● (125 to 200)	●		● (Except 50)	●	●				●
D-M9□W-588	●	Note 1) ●		●	●	●	● (20 to 63)	● (125 to 200)	●		● (Except 50)	●	●				●
D-M9□WV-588		Note 2) ●		●	●	●		● (125 to 200)	●		● (Except 50)	●	●				●
D-H7A2-588	●	Note 3) ●					● (20 to 63)										
D-F7P-588	●	Note 4) ●							● (12 to 160)								
D-F7PV-588	●	Note 4) ●							● (12 to 160)								
D-F5P-588			● (160 to 250)	●				● (125 to 200)									
D-Y7P-588			● (160 to 200)	●				● (125 to 200)		●	● (25 to 100)	● (25 to 63)	● (25 to 40)				
D-Y7PV-588			● (160 to 200)	●				● (125 to 200)		●	● (25 to 100)	● (25 to 63)	● (25 to 40)				
D-S7P-588														● (50 to 100)	● (20 to 40)	● (20 to 40)	
D-S9P-588															● (10, 15)	● (10, 15)	
D-S9PV-588															● (10, 15)	● (10, 15)	
D-F6P-588																	
D-C73-588 D-C80-588	●	Note 3) ●					● (20 to 63)										
D-A73-588 D-A80-588	●	Note 4) ●							● (12 to 160)								
D-A73H-588 D-A80H-588	●	Note 4) ●							● (12 to 160)								
D-A54-588 D-A67-588			● (160 to 250)	●				● (125 to 200)									
D-A90-588 D-A93-588	●	● (16 to 25)		●	●	●	● (20 to 63)	● (125 to 200)	●		● (10 to 20)	● (16, 20)	●				●
D-A90V-588 D-A93V-588		Note 5) ●		●	●	●		● (125 to 200)	●		● (10 to 20)	● (16, 20)	●				●
D-90A-588 D-93A-588								● (125 to 200)							● (10, 15)	● (10, 15)	
D-Z73-588 D-Z80-588			● (160 to 200)	●				● (125 to 200)		●	● (25 to 100)	● (25 to 63)	● (25 to 40)				
D-E73A-588 D-E80A-588																	
D-R73-588 D-R80-588														● (50 to 100)	● (20 to 40)	● (20 to 40)	

* (): Cylinder size

Note 1) 55-C85 Band mounting all sizes, and Rail mounting for 8 to 16 only.

Note 2) 55-C85 Band mounting only.

Note 3) 55-C85 Rail mounting only.

Note 4) 55-C85 Rail mounting only.

Note 5) 55-C85 Rail mounting only, for 16 to 25 only.

ATEX Compliant

Solid State Switch/Direct Mounting

D-M9N(V)·D-M9P(V)·D-M9B(V)-588



II 3G Ex nA II T5 X -10°C ≤ Ta ≤ +60°C
II 3D Ex tD A22 IP67 T93°C X

Auto Switch Specifications

PLC: Programmable Logic Controller

D-M9□/D-M9□V (With indicator light)						
Auto switch part no.	D-M9N	D-M9NV	D-M9P	D-M9PV	D-M9B	D-M9BV
Electrical entry direction	In-line	Perpendicular	In-line	Perpendicular	In-line	Perpendicular
Wiring type	3-wire				2-wire	
Output type	NPN		PNP		—	
Applicable load	IC circuit, Relay, PLC				24 VDC relay, PLC	
Power supply	5/12/24 VDC (4.5 to 28 V)				—	
Current consumption	10 mA or less				—	
Load voltage	28 VDC or less		—		24 VDC (10 to 28V)	
Load current	40 mA or less				2.5 to 40 mA	
Internal voltage drop	0.8 V or less at 10 mA (2 V or less at 40 mA)				4 V or less	
Leakage current	100 μA or less at 24 VDC				0.8 mA or less	
Indicator light	Red LED illuminates when turned ON.					
Standard	CE marking					

● This category 3 type auto switch can only be used in zones 2 and 22.

Oilproof Heavy-duty Lead Wire Specifications

Auto switch model		D-M9N□	D-M9P□	D-M9B□
Sheath	Outside diameter [mm]	2.7 x 3.2 (ellipse)		
	Number of cores	3 cores (Brown/Blue/Black)		2 cores (Brown/Blue)
Insulator	Outside diameter [mm]	ø0.9		
	Cross section [mm²]	0.15		
Conductor	Strand diameter [mm]	ø0.05		
	Minimum bending radius [mm] (Reference)	20		

How to Order

D-M9 N V L-588

Auto switch part no. ●

● ATEX category 3

Wiring and output ●

N	3-wire NPN
P	3-wire PNP
B	2-wire

Electrical entry direction ●

Nil	In-line
V	Perpendicular

Lead wire length ●

Nil	0.5 m
L	3 m
Z	5 m
SAPC	0.5 m + M8 - 3 pins pre-wired connector
MAPC	1 m + M8 - 3 pins pre-wired connector
SBPC	0.5 m + M8 - 4 pins pre-wired connector
MBPC	1 m + M8 - 4 pins pre-wired connector
SDPC	0.5 m + M12 - 4 pins pre-wired connector
MDPC	1 m + M12 - 4 pins pre-wired connector

Connector Specifications

Connector type	M8 - 3 pins	M8 - 4 pins	M12 - 4 pins
Pin arrangement			

ATEX Compliant

2-Colour Solid State Switch/Direct Mounting

D-M9NW(V)·D-M9PW(V)·D-M9BW(V)-588



II 3G Ex nA II T5 X -10°C ≤ Ta ≤ +60°C
II 3D Ex tD A22 IP67 T93°C X

Auto Switch Specifications

PLC: Programmable Logic Controller

D-M9□W/D-M9□WV (With 2 colour indicator light)						
Auto switch part no.	D-M9NW	D-M9NWV	D-M9PW	D-M9PWV	D-M9BW	D-M9BWV
Electrical entry direction	In-line	Perpendicular	In-line	Perpendicular	In-line	Perpendicular
Wiring type	3-wire				2-wire	
Output type	NPN		PNP		—	
Applicable load	IC circuit, Relay, PLC				24 VDC relay, PLC	
Power supply	5/12/24 VDC (4.5 to 28 V)				—	
Current consumption	10 mA or less				—	
Load voltage	28 VDC or less		—		24 VDC (10 to 28V)	
Load current	40 mA or less				2.5 to 40 mA	
Internal voltage drop	0.8 V or less at 10 mA (2 V or less at 40 mA)				4 V or less	
Leakage current	100 μA or less at 24 VDC				0.8 mA or less	
Indicator light	Operating position Red LED illuminates. Optimum operating position Green LED illuminates.					
Standard	CE marking					

● This category 3 type auto switch can only be used in zones 2 and 22.

Oilproof Flexible Heavy-duty Lead Wire Specifications

Auto switch model		D-M9NW□	D-M9PW□	D-M9BW□
Sheath	Outside diameter [mm]	2.7 x 3.2 (ellipse)		
	Number of cores	3 cores (Brown/Blue/Black)		2 cores (Brown/Blue)
Insulator	Outside diameter [mm]	ø0.9		
	Cross section [mm ²]	0.15		
Conductor	Strand diameter [mm]	ø0.05		
	Minimum bending radius [mm] (Reference)	20		

How to Order

D - M9 N W V L - 588

Auto switch part no. ●

● ATEX category 3

Wiring and output ●

N	3-wire NPN
P	3-wire PNP
B	2-wire

2 colour display ●

Electrical entry direction ●

Nil	In-line
V	Perpendicular

Lead wire length ●

Nil	0.5 m
M	1 m
L	3 m
Z	5 m
SAPC	0.5 m + M8 - 3 pins pre-wired connector
MAPC	1 m + M8 - 3 pins pre-wired connector
SBPC	0.5 m + M8 - 4 pins pre-wired connector
MBPC	1 m + M8 - 4 pins pre-wired connector
SDPC	0.5 m + M12 - 4 pins pre-wired connector
MDPC	1 m + M12 - 4 pins pre-wired connector

Connector Specifications

Connector type	M8 - 3 pins	M8 - 4 pins	M12 - 4 pins
Pin arrangement			

ATEX Compliant

Solid State Switch/Band Mounting D-H7A2-588



II 3G Ex nA II T5 X -10°C ≤ Ta ≤ +60°C
II 3D Ex tD A22 IP67 T93°C X

Auto Switch Specifications

PLC: Programmable Logic Controller

D-H7 A2 (With indicator light)	
Auto switch part no.	D-H7A2
Wiring type	3-wire
Output type	PNP
Applicable load	IC circuit/Relay/PLC
Power supply	5/12/24 VDC (4.5 to 28 VDC)
Current consumption	10 mA or less
Load current	80 mA or less
Internal voltage drop	0.8 V or less
Leakage current	100 μA or less at 24 VDC
Indicator light	Red LED illuminates when turned ON.
Standard	CE marking

● This category 3 type auto switch can only be used in zones 2 and 22.

Oilproof Heavy-duty Lead Wire Specifications

Auto switch model		D-H7A2
Sheath	Outside diameter [mm]	ø3.4
	Number of cores	3 cores (Brown/Blue/Black)
Insulator	Outside diameter [mm]	ø1.1
	Cross section [mm ²]	0.2
Conductor	Strand diameter [mm]	ø0.08
	Minimum bending radius [mm] (Reference)	21

How to Order

D-H7A2 **-588**

Auto switch part no. ●

● ATEX category 3

Lead wire length ●

Nil	0.5 m
L	3 m
Z	5 m
SAPC	0.5 m + M8 - 3 pins pre-wired connector
MAPC	1 m + M8 - 3 pins pre-wired connector
SBPC	0.5 m + M8 - 4 pins pre-wired connector
MBPC	1 m + M8 - 4 pins pre-wired connector
SDPC	0.5 m + M12 - 4 pins pre-wired connector
MDPC	1 m + M12 - 4 pins pre-wired connector

Connector Specifications

Connector type	M8 - 3 pins	M8 - 4 pins	M12 - 4 pins
Pin arrangement			

ATEX Compliant

Solid State Switch/Rail Mounting D-F7P(V)-588



II 3G Ex nA II T5 X -10°C ≤ Ta ≤ +60°C
II 3D Ex tD A22 IP67 T93°C X

Auto Switch Specifications

PLC: Programmable Logic Controller

D-F7P, D-F7PV (With indicator light)		
Auto switch part no.	D-F7P	D-F7PV
Wiring type	3-wire	
Output type	PNP	
Applicable load	IC circuit/Relay/PLC	
Power supply	5/12/24 VDC (4.5 to 28 VDC)	
Current consumption	10 mA or less	
Load current	80 mA or less	
Internal voltage drop	0.8 V or less	
Leakage current	100 μA or less at 24 VDC	
Indicator light	Red LED illuminates when turned ON.	
Standard	CE marking	

● This category 3 type auto switch can only be used in zones 2 and 22.

Grommet



Oilproof Heavy-duty Lead Wire Specifications

Auto switch model		D-F7P□
Sheath	Outside diameter [mm]	ø3.4
Insulator	Number of cores	3 cores (Brown/Blue/Black)
	Outside diameter [mm]	ø1.1
Conductor	Cross section [mm²]	0.2
	Strand diameter [mm]	ø0.08
Minimum bending radius [mm] (Reference)		21

How to Order

D-F7P □ □ -588

Auto switch part no. ●

● ATEX category 3

Electrical entry direction ●

Nil	In-line
V	Perpendicular

Lead wire length ●

Nil	0.5 m
L	3 m
Z	5 m
SAPC	0.5 m + M8 - 3 pins pre-wired connector
MAPC	1 m + M8 - 3 pins pre-wired connector
SBPC	0.5 m + M8 - 4 pins pre-wired connector
MBPC	1 m + M8 - 4 pins pre-wired connector
SDPC	0.5 m + M12 - 4 pins pre-wired connector
MDPC	1 m + M12 - 4 pins pre-wired connector

Connector Specifications

Connector type	M8 - 3 pins	M8 - 4 pins	M12 - 4 pins
Pin arrangement			

ATEX Compliant

Solid State Switch/Tie-rod Mounting D-F5P-588



II 3G Ex nA II T5 X -10°C ≤ Ta ≤ +60°C
II 3D Ex tD A22 IP67 T93°C X

Auto Switch Specifications

PLC: Programmable Logic Controller

D-F5P (With indicator light)	
Auto switch part no.	D-F5P
Wiring type	3-wire
Output type	PNP
Applicable load	IC circuit/Relay/PLC
Power supply	5/12/24 VDC (4.5 to 28 VDC)
Current consumption	10 mA or less
Load current	80 mA or less
Internal voltage drop	0.8 V or less
Leakage current	100 μA or less at 24 VDC
Indicator light	Red LED illuminates when turned ON.
Standard	CE marking

● This category 3 type auto switch can only be used in zones 2 and 22.

Oilproof Heavy-duty Lead Wire Specifications

Auto switch model		D-F5P
Sheath	Outside diameter [mm]	ø4
Insulator	Number of cores	3 cores (Brown/Blue/Black)
	Outside diameter [mm]	ø1.22
Conductor	Cross section [mm²]	0.3
	Strand diameter [mm]	ø0.08
Minimum bending radius [mm] (Reference)		24

How to Order

D - F5P **- 588**

Auto switch part no. ●

● ATEX category 3

Lead wire length ●

Nil	0.5 m
L	3 m
Z	5 m
SAPC	0.5 m + M8 - 3 pins pre-wired connector
MAPC	1 m + M8 - 3 pins pre-wired connector
SBPC	0.5 m + M8 - 4 pins pre-wired connector
MBPC	1 m + M8 - 4 pins pre-wired connector
SDPC	0.5 m + M12 - 4 pins pre-wired connector
MDPC	1 m + M12 - 4 pins pre-wired connector

Connector Specifications

Connector type	M8 - 3 pins	M8 - 4 pins	M12 - 4 pins
Pin arrangement			

ATEX Compliant

Solid State Switch/Direct Mounting D-Y7P(V)-588



II 3G Ex nA II T5 X -10°C ≤ Ta ≤ +60°C
II 3D Ex tD A22 IP67 T93°C X

Auto Switch Specifications

PLC: Programmable Logic Controller

D-Y7P/D-Y7PV (With indicator light)		
Auto switch part no.	D-Y7P	D-Y7PV
Electrical entry direction	In-line	Perpendicular
Wiring type	3-wire	
Output type	PNP	
Applicable load	IC circuit/Relay/PLC	
Power supply	5/12/24 VDC (4.5 to 28 VDC)	
Current consumption	10 mA or less	
Load current	80 mA or less	
Internal voltage drop	0.8 V or less	
Leakage current	100 μA or less at 24 VDC	
Indicator light	Red LED illuminates when turned ON.	
Standard	CE marking	

• This category 3 type auto switch can only be used in zones 2 and 22.

Oilproof Flexible Heavy-duty Lead Wire Specifications

Auto switch model		D-Y7P□
Sheath	Outside diameter [mm]	ø3.4
Insulator	Number of cores	3 cores (Brown/Blue/Black)
	Outside diameter [mm]	ø1.0
Conductor	Cross section [mm²]	0.15
	Strand diameter [mm]	ø0.05
Minimum bending radius [mm] (Reference)		21

How to Order

D - Y7P □ □ - 588

Auto switch part no. •

• ATEX category 3

Electrical entry direction •

Nil	In-line
V	Perpendicular

Lead wire length •

Nil	0.5 m
L	3 m
Z	5 m
SAPC	0.5 m + M8 - 3 pins pre-wired connector
MAPC	1 m + M8 - 3 pins pre-wired connector
SBPC	0.5 m + M8 - 4 pins pre-wired connector
MBPC	1 m + M8 - 4 pins pre-wired connector
SDPC	0.5m + M12 - 4 pins pre-wired connector
MDPC	1m + M12 - 4 pins pre-wired connector

Connector Specifications

Connector type	M8 - 3 pins	M8 - 4 pins	M12 - 4 pins
Pin arrangement			

ATEX Compliant

Solid State Switch/Direct Mounting D-S7P-588

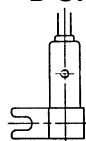


II 3G Ex nA II T5 X -10°C ≤ Ta ≤ +60°C
II 3D Ex tD A22 IP67 T93°C X

**Grommet/Connector
Electrical entry: In-line**

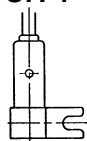


D-S7P2



Left hand mounting

D-S7P1



Right hand mounting

Auto Switch Specifications

PLC: Programmable Logic Controller

D-S7P1/D-S7P2 (With indicator light)		
Auto switch part no.	D-S7P1	D-S7P2
Wiring type	3-wire	
Output type	PNP	
Applicable load	IC circuit/Relay/PLC	
Power supply	5/12/24 VDC (4.5 to 28 VDC)	
Current consumption	10 mA or less	
Load current	40 mA or less	
Internal voltage drop	0.8 V or less at 10 mA (2 V or less at 40 mA)	
Leakage current	100 μA or less at 24 VDC	
Indicator light	Red LED illuminates when turned ON.	
Standard	CE marking	

● This category 3 type auto switch can only be used in zones 2 and 22.

Oilproof Heavy-duty Lead Wire Specifications

Auto switch model		D-S7P□
Sheath	Outside diameter [mm]	ø3.4
Insulator	Number of cores	3 cores (Brown/Blue/Black)
	Outside diameter [mm]	ø1.1
Conductor	Cross section [mm ²]	0.2
	Strand diameter [mm]	ø0.08
Minimum bending radius [mm] (Reference)		21

How to Order

D - S7P □ □ - 588

Auto switch part no. ●

● ATEX category 3

Mounting ●

1	Right hand mounting
2	Left hand mounting

Lead wire length ●

Nil	0.5 m
L	3 m
Z	5 m
SAPC	0.5 m + M8 - 3 pins pre-wired connector
MAPC	1 m + M8 - 3 pins pre-wired connector
SBPC	0.5 m + M8 - 4 pins pre-wired connector
MBPC	1 m + M8 - 4 pins pre-wired connector
SDPC	0.5 m + M12 - 4 pins pre-wired connector
MDPC	1 m + M12 - 4 pins pre-wired connector

Connector Specifications

Connector type	M8 - 3 pins	M8 - 4 pins	M12 - 4 pins
Pin arrangement			

ATEX Compliant

Solid State Switch/Direct Mounting D-S9P(V)-588



II 3G Ex nA II T5 X -10°C ≤ Ta ≤ +60°C
II 3D Ex tD A22 IP67 T93°C X

Auto Switch Specifications

PLC: Programmable Logic Controller

D-S9P/D-S9PV (With indicator light)		
Auto switch part no.	D-S9P1 D-S9P2	D-S9PV1 D-S9PV2
Electrical entry direction	In-line	Perpendicular
Wiring type	3-wire	
Output type	PNP	
Applicable load	IC circuit/Relay/PLC	
Power supply	5/12/24 VDC (4.5 to 28 VDC)	
Current consumption	10 mA or less	
Load current	40 mA or less	
Internal voltage drop	0.8 V or less at 10 mA (2 V or less at 40 mA)	
Leakage current	100 μA or less at 24 VDC	
Indicator light	Red LED illuminates when turned ON.	
Standard	CE marking	

● This category 3 type auto switch can only be used in zones 2 and 22.

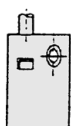
Grommet



Oilproof Heavy-duty Lead Wire Specifications

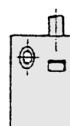
Auto switch model		D-S9P□
Sheath	Outside diameter [mm]	ø3.4
Insulator	Number of cores	3 cores (Brown/Blue/Black)
	Outside diameter [mm]	ø1.1
Conductor	Cross section [mm²]	0.2
	Strand diameter [mm]	ø0.08
Minimum bending radius [mm] (Reference)		21

D-S9P1



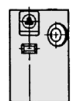
Left hand mounting

D-S9P2



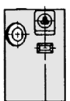
Right hand mounting

D-S9PV1



Left hand mounting

D-S9PV2



Right hand mounting

How to Order

D - S9P **- 588**

Auto switch part no. ●

● ATEX category 3

Electrical entry direction ●

Nil	In-line
V	Perpendicular

Mounting ●

1	Right hand mounting
2	Left hand mounting

Lead wire length ●

Nil	0.5 m
L	3 m
Z	5 m
SAPC	0.5 m + M8 - 3 pins pre-wired connector
MAPC	1 m + M8 - 3 pins pre-wired connector
SBPC	0.5 m + M8 - 4 pins pre-wired connector
MBPC	1 m + M8 - 4 pins pre-wired connector
SDPC	0.5 m + M12 - 4 pins pre-wired connector
MDPC	1 m + M12 - 4 pins pre-wired connector

Connector Specifications

Connector type	M8 - 3 pins	M8 - 4 pins	M12 - 4 pins
Pin arrangement			

ATEX Compliant

Solid State Switch for Hygienic Design Cylinder/Direct Mounting D-F6P-588



II 3G Ex nA II T5 X -10°C ≤ Ta ≤ +60°C
II 3D Ex tD A22 IP67 T93°C X

Grommet



Auto Switch Specifications

PLC: Programmable Logic Controller

D-F6P (With indicator light)	
Auto switch part no.	D-F6P
Electrical entry direction	In-line
Wiring type	3-wire
Output type	PNP
Applicable load	IC circuit, Relay, PLC
Power supply	5/12/24 VDC (4.5 to 28 V)
Current consumption	10 mA or less
Load current	40 mA or less
Internal voltage drop	0.8 V or less
Leakage current	100 μA or less at 24 VDC
Indicator light	Red LED illuminates when turned ON.
Standard	CE marking

● This category 3 type auto switch can only be used in zones 2 and 22.

Oilproof Flexible Heavy-duty Lead Wire Specifications

Auto switch model		D-F6P
Sheath	Outside diameter [mm]	2.7 x 3.2 (ellipse)
	Number of cores	3 cores (Brown/Blue/Black)
Insulator	Outside diameter [mm]	ø0.9
	Cross section [mm²]	0.15
Conductor	Strand diameter [mm]	ø0.05
	Minimum bending radius [mm] (Reference)	20

How to Order

D - F6P **- 588**

Auto switch part no. ●

● ATEX category 3

Lead wire length ●

Nil	0.5 m
L	3 m
Z	5 m
SAPC	0.5 m + M8 - 3 pins pre-wired connector
MAPC	1 m + M8 - 3 pins pre-wired connector
SBPC	0.5 m + M8 - 4 pins pre-wired connector
MBPC	1 m + M8 - 4 pins pre-wired connector
SDPC	0.5 m + M12 - 4 pins pre-wired connector
MDPC	1 m + M12 - 4 pins pre-wired connector

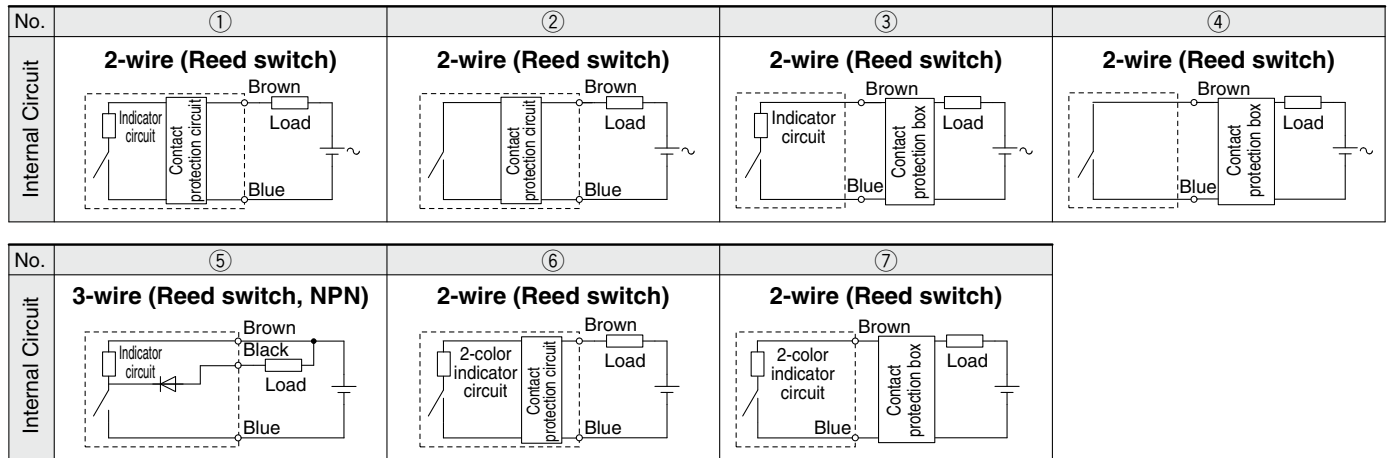
Connector Specifications

Connector type	M8 - 3 pins	M8 - 4 pins	M12 - 4 pins
Pin arrangement			

Prior to Use

Auto Switch/Internal Circuit

Reed Auto Switch



Contact Protection Box: CD-P12

<Applicable switch models>

D-A73/A8, D-A73H/A80H, D-C73/C8, D-E73A/E80A, D-Z73/Z8, 9□A, and D-A9/A9□V type

The auto switches above do not have a built-in contact protection circuit. A contact protection box is not required for solid state auto switches due to their construction.

- Where the operation load is an inductive load.
- Where the wiring length to load is greater than 5 m.
Therefore, use a contact protection box with the switch for any of the above cases:
The contact life may be shortened (due to permanent energizing conditions.)

Even for the built-in contact protection circuit type (D-A54), **use the contact protection box when the wiring length to load is very long (over 30 m) and PLC (Programmable Logic Controller) with a large inrush current is used.**

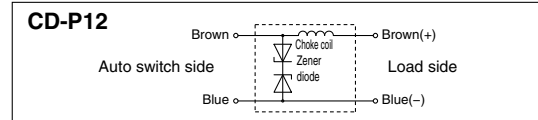
Contact Protection Box Specifications

Part no.	CD-P12
Load voltage	24 VDC
Max. load current	50 mA

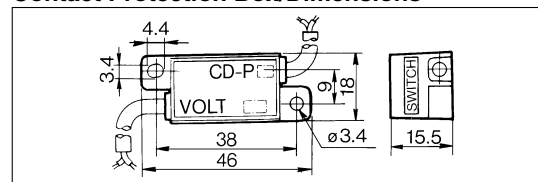


* Lead wire length — Auto switch connection side 0.5 m
Load connection side 0.5 m

Contact Protection Box Internal Circuit



Contact Protection Box/Dimensions



Contact Protection Box Connection

To connect a switch unit to a contact protection box, connect the lead wire from the side of the contact protection box marked SWITCH to the lead wire coming out of the switch unit. Keep the switch as close as possible to the contact protection box, with a lead wire length of no more than 1 meter.

ATEX Compliant

Reed Switch/Band Mounting D-C73/D-C80-588



II 3G Ex nA II T5 X -10°C ≤ Ta ≤ +60°C
II 3D Ex tD A22 IP67 T93°C X

Grommet



Auto Switch Specifications

PLC: Programmable Logic Controller

D-C7 (With indicator light)		
Auto switch model number	D-C73	
Applicable load	Relay/PLC	
Load voltage	24 VDC	
Max. load current and range	5 to 40 mA	
Internal Circuit *	③	
Contact protection circuit	None	
Internal voltage drop	2.4 V or less	
Indicator light	Red LED illuminates when turned ON	
Standards	CE marking	
D-C8 (Without indicator light)		
Auto switch model number	D-C80	
Applicable load	Relay/PLC/IC circuit	
Load voltage	24 V ^{AC} _{DC} or less	48 V ^{AC} _{DC}
Max. load current	50 mA	40 mA
Internal Circuit *	④	
Contact protection circuit	None	
Internal resistance	1 Ω or less (Including 3 m lead wire)	
Standards	CE marking	

Oilproof Heavy-duty Lead Wire Specifications

Auto switch type		D-C73/D-C80
Sheath	Outside diameter [mm]	ø3.4
Insulator	Number of cores	2 cores (Brown, Blue)
	Outside diameter [mm]	ø1.1
Conductor [mm]	Cross section [mm ²]	0.2
	Strand diameter [mm]	ø0.08
Minimum bending radius of lead wire [mm] (Reference)		21

* For internal circuit, refer to the Internal Circuit No. on page 79.

● This category 3 type auto switch can only be used in zones 2 and 22.

How to Order

D - C				- 588
		● ATEX category 3		
Auto switch model number ●		● Lead wire length		
73	With indicator light	Nil	0.5 m	
80	Without indicator light	L	3 m	
		Z	5 m (Except D-C80)	

ATEX Compliant

Reed Switch/Rail Mounting D-A73(H)/D-A80(H)-588



II 3G Ex nA II T5 X -10°C ≤ Ta ≤ +60°C
II 3D Ex tD A22 IP67 T93°C X

Grommet
Electrical entry: Perpendicular



Auto Switch Specifications

PLC: Programmable Logic Controller

D-A73, D-A73H (With indicator light)	
Auto switch model number	D-A73/D-A73H
Applicable load	Relay/PLC
Load voltage	24 VDC
Load current range	5 to 40 mA
Internal Circuit *	③
Contact protection circuit	None
Internal voltage drop	2.4 V or less
Indicator light	Red LED illuminates when turned ON
Standard	CE marking
D-A80, D-A80H (Without indicator light)	
Auto switch model number	D-A80/D-A80H
Applicable load	Relay/IC circuit/PLC
Load voltage	24 V ^{AC} _{DC} or less
Max. load current	50 mA
Internal Circuit *	④
Contact protection circuit	None
Internal resistance	1 Ω or less (Including 3 m lead wire)
Standard	CE marking

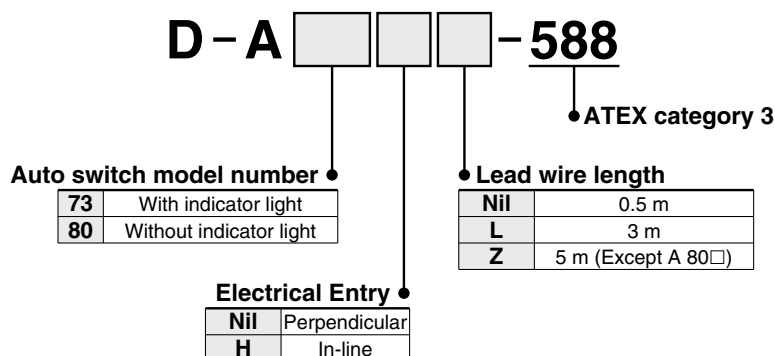
Oilproof Heavy-duty Lead Wire Specifications

Auto switch type		D-A73/D-A73H/D-A80/D-A80H
Sheath	Outside diameter [mm]	ø3.4
Insulator	Number of cores	2 cores (Brown, Blue)
	Outside diameter [mm]	ø1.1
Conductor	Cross section [mm ²]	0.2
	Strand diameter [mm]	ø0.08
Minimum bending radius of lead wire [mm] (Reference)		21

* For internal circuit, refer to the Internal Circuit No. on page 79.

● This category 3 type auto switch can only be used in zones 2 and 22.

How to Order



ATEX Compliant

Reed Switch/Tie-rod Mounting D-A54/D-A67-588



II 3G Ex nA II T5 X -10°C ≤ Ta ≤ +60°C
II 3D Ex tD A22 IP67 T93°C X

Grommet



Auto Switch Specifications

PLC: Programmable Logic Controller

D-A54 (With indicator light)	
Auto switch model number	D-A54
Applicable load	Relay/PLC
Load voltage	24 VDC
Max. load current and range	5 to 50 mA
Internal Circuit *	①
Contact protection circuit	Built-in
Internal voltage drop	2.4 V or less (up to 20 mA) / 3.5 V or less (up to 50 mA)
Indicator light	Red LED illuminates when turned ON
Standard	CE marking
D-A67 (Without indicator light)	
Auto switch model number	D-A67
Applicable load	PLC/IC circuit
Load voltage	MAX. 24 VDC
Max. load current and range	30 mA
Internal Circuit *	④
Contact protection circuit	None
Internal resistance	1 Ω or less (Including 3 m lead wire)
Standard	CE marking

Oilproof Heavy-duty Lead Wire Specifications

Auto switch type		D-A54/D-A67
Sheath	Outside diameter [mm]	ø4
	Number of cores	2 cores (Brown, Blue)
Insulator	Outside diameter [mm]	ø1.22
	Cross section [mm ²]	0.3
Conductor	Strand diameter [mm]	ø0.08
	Minimum bending radius of lead wire [mm] (Reference)	24

* For internal circuit, refer to the Internal Circuit No. on page 79.

● This category 3 type auto switch can only be used in zones 2 and 22.

How to Order

D - A **- 588**

● ATEX category 3

Auto switch model number ●

54	With indicator light
67	Without indicator light

● Lead wire length

Nil	0.5 m
L	3 m
Z	5 m (Except D-A67)

ATEX Compliant

Reed Switch/Direct Mounting D-A90(V)/D-A93(V)-588



II 3G Ex nA II T5 X -10°C ≤ Ta ≤ +60°C
II 3D Ex tD A22 IP67 T93°C X

Auto Switch Specifications

PLC: Programmable Logic Controller

D-A90, D-A90V (Without indicator light)		
Auto switch model number	D-A90/D-A90V	
Applicable load	IC circuit/Relay/PLC	
Load voltage	24 V ^{AC} _{DC} or less	48 V ^{AC} _{DC} or less
Max. load current	50 mA	40 mA
Internal Circuit *	④	
Contact protection circuit	None	
Internal resistance	1 Ω or less (Including 3 m lead wire)	
Standard	CE marking	
D-A93, D-A93V (With indicator light)		
Auto switch model number	D-A93/D-A93V	
Applicable load	Relay/PLC	
Load voltage	24 VDC	
Max. load current and load current range	5 to 40 mA	
Internal Circuit *	③	
Contact protection circuit	None	
Internal voltage drop	D-A 93 — 2.4 V or less (up to 20 mA)/3 V or less (up to 40 mA) D-A 93V — 2.7 V or less	
Indicator light	Red LED illuminates when turned ON	
Standard	CE marking	

Grommet



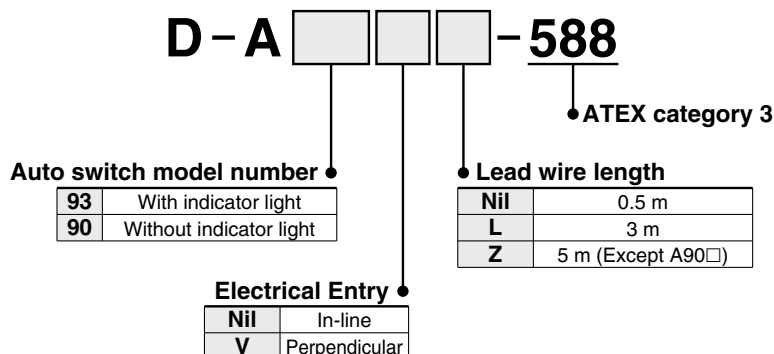
Oilproof Heavy-duty Lead Wire Specifications

Auto switch type		D-A90 (V)/D-A93 (V)
Sheath	Outside diameter [mm]	ø2.7
	Number of cores	2 cores (Brown, Blue)
Insulator	Outside diameter [mm]	ø0.96
	Cross section [mm ²]	0.18
Conductor	Strand diameter [mm]	ø0.08
	Minimum bending radius of lead wire [mm] (Reference)	17

* For internal circuit, refer to the Internal Circuit No. on page 79.

● This category 3 type auto switch can only be used in zones 2 and 22.

How to Order



ATEX Compliant

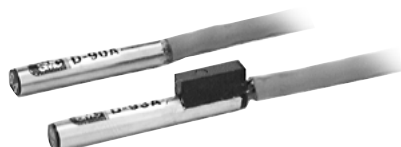
Reed Switch/Direct Mounting D-90A/D-93A-588



II 3G Ex nA II T5 X -10°C ≤ Ta ≤ +60°C
II 3D Ex tD A22 IP67 T93°C X

Grommet

Lead wire: Heavy-duty cord



Auto Switch Specifications

PLC: Programmable Logic Controller

D-90A (Without indicator light)	
Auto switch model number	D-90A
Applicable load	Relay/IC circuit/PLC
Load voltage	24 V ^{AC} DC
Max. load current	50 mA
Internal Circuit *	④
Internal resistance	1 Ω or less (Including 3 m lead wire)
Standard	CE marking
D-93A (With indicator light)	
Auto switch model number	D-93A
Applicable load	Relay/PLC
Load voltage	24 VDC
Load current range	5 to 40 mA
Internal Circuit *	③
Internal voltage drop	2.4V or less
Indicator light	Red LED illuminates when turned ON
Standard	CE marking

Oilproof Heavy-duty Lead Wire Specifications

Auto switch type		D-90A/D-93A
Sheath	Outside diameter [mm]	ø3.4
Insulator	Number of cores	2 cores (Brown, Blue)
	Outside diameter [mm]	ø1.1
Conductor	Cross section [mm ²]	0.2
	Strand diameter [mm]	ø0.08
Minimum bending radius of lead wire [mm] (Reference)		21

* For internal circuit, refer to the Internal Circuit No. on page 79.

● This category 3 type auto switch can only be used in zones 2 and 22.

How to Order

D - A - 588	
● ATEX category 3	
● Auto switch model number	
93	With indicator light
90	Without indicator light
● Lead wire length	
Nil	0.5 m
L	3 m
Z	5 m

ATEX Compliant

Reed Switch/Direct Mounting D-Z73/D-Z80-588



II 3G Ex nA II T5 X -10°C ≤ Ta ≤ +60°C
II 3D Ex tD A22 IP67 T93°C X

Grommet



Auto Switch Specifications

PLC: Programmable Logic Controller

D-Z73 (With indicator light)		
Auto switch model number	D-Z73	
Applicable load	Relay/PLC	
Load voltage	24 VDC	
Max. load current and range	5 to 40 mA	
Internal Circuit *	③	
Contact protection circuit	None	
Internal voltage drop	2.4 V or less (up to 20 mA)/3 V or less (up to 40 mA)	
Indicator light	Red LED illuminates when turned ON	
Standard	CE marking	
D-Z80 (Without indicator light)		
Auto switch model number	D-Z80	
Applicable load	Relay/PLC/IC circuit	
Load voltage	24 V ^{AC} DC or less	48 V ^{AC} DC
Max. load current	50 mA	40 mA
Internal Circuit *	④	
Contact protection circuit	None	
Internal resistance	1 Ω or less (Including 3 m lead wire)	
Standard	CE marking	

Oilproof Heavy-duty Lead Wire Specifications

Auto switch type		D-Z73/D-Z80
Sheath	Outside diameter [mm]	ø2.7
	Number of cores	2 cores (Brown, Blue)
Insulator	Outside diameter [mm]	ø1.1
	Cross section [mm ²]	0.18
Conductor	Strand diameter [mm]	ø0.08
	Minimum bending radius of lead wire [mm] (Reference)	17

* For internal circuit, refer to the Internal Circuit No. on page 79.

● This category 3 type auto switch can only be used in zones 2 and 22.

How to Order

D - Z **- 588**

● ATEX category 3

Auto switch model number ●

73	With indicator light
80	Without indicator light

● Lead wire length

Nil	0.5 m
L	3 m
Z	5 m (Except D-Z80)

ATEX Compliant

Reed Switch/Direct Mounting D-E73A/D-E80A-588



II 3G Ex nA II T5 X -10°C ≤ Ta ≤ +60°C
II 3D Ex tD A22 IP67 T93°C X

Grommet



Auto Switch Specifications

PLC: Programmable Logic Controller

D-E73A (With indicator light)		
Auto switch model number	D-E73A	
Applicable load	Relay/PLC	
Load voltage	24 VDC	
Max. load current and range	5 to 40 mA	
Internal Circuit *	③	
Contact protection circuit	None	
Internal voltage drop	2.4 V or less	
Indicator light	Red LED illuminates when turned ON	
Standard	CE marking	
D-E80A (Without indicator light)		
Auto switch model number	D-E80A	
Applicable load	Relay/PLC/IC circuit	
Load voltage	24 V ^{AC} _{DC} or less	48 V ^{AC} _{DC}
Max. load current	50 mA	40 mA
Internal Circuit *	④	
Contact protection circuit	None	
Internal resistance	1 Ω or less (Including 3 m lead wire)	
Standard	CE marking	

Oilproof Heavy-duty Lead Wire Specifications

Auto switch type		D-E73A/D-E80A
Sheath	Outside diameter [mm]	ø3.4
	Number of cores	2 cores (Brown, Blue)
Insulator	Outside diameter [mm]	ø1.1
	Cross section [mm ²]	0.2
Conductor	Strand diameter [mm]	ø0.08
	Minimum bending radius of lead wire [mm] (Reference)	21

* For internal circuit, refer to the Internal Circuit No. on page 79.

● This category 3 type auto switch can only be used in zones 2 and 22.

How to Order

D - E **A** **- 588**

● ATEX category 3

Auto switch model number ●

73	With indicator light
80	Without indicator light

● Lead wire length

Nil	0.5 m
L	3 m

ATEX Compliant

Reed Switch/Direct Mounting D-R73/D-R80-588

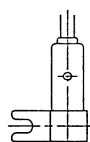


II 3G Ex nA II T5 X -10°C ≤ Ta ≤ +60°C
II 3D Ex tD A22 IP67 T93°C X

**Grommet
Electrical entry: In-line**

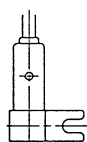


D-R□□2



Left hand mounting

D-R□□1



Right hand mounting

Auto Switch Specifications

PLC: Programmable Logic Controller

D-R73□ (With indicator light)	
Auto switch model number	D-R731/D-R732
Applicable load	Relay/PLC
Load voltage	24 VDC
Load current range	5 to 40 mA
Internal Circuit *	③
Internal voltage drop	2.4 V or less
Indicator light	Red LED illuminates when turned ON
Standard	CE marking
D-R80□ (Without indicator light)	
Auto switch model number	D-R801/D-R802
Applicable load	Relay/IC circuit/PLC
Load voltage	24 V ^{AC} DC
Max. load current	50 mA
Internal Circuit *	④
Internal resistance	1 Ω or less (Including 3 m lead wire)
Standard	CE marking

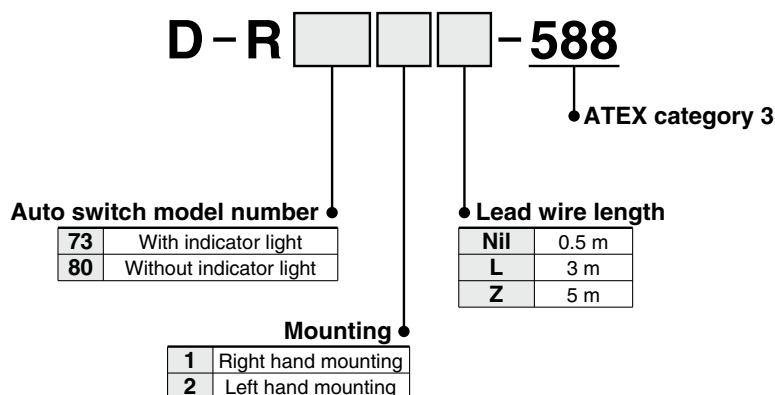
Oilproof Heavy-duty Lead Wire Specifications

Auto switch type		D-R73□/D-R80□
Sheath	Outside diameter [mm]	ø3.4
	Number of cores	2 cores (Brown, Blue)
Insulator	Outside diameter [mm]	ø1.1
	Cross section [mm ²]	0.2
Conductor	Strand diameter [mm]	ø0.08
	Minimum bending radius of lead wire [mm] (Reference)	21

* For internal circuit, refer to the Internal Circuit No. on page 79.

● This category 3 type auto switch can only be used in zones 2 and 22.

How to Order



ATEX Compliant

Rotary Actuator: Vane Type

Series 55-CRB1

Sizes: 50, 63, 80, 100



CE  II 2Gc 90°C (T5) Ta 5°C to 40°C
110°C (T4) Ta 40°C to 60°C

How to Order

Standard

55 – CRB1 **B** **W** **80** – **90** **S** –

ATEX category 2

Mounting

B	Basic
L	Foot

Size

50
63
80
100

Thread Port

Nil	Rc
-XF	G
-XN	NPT

Shaft type

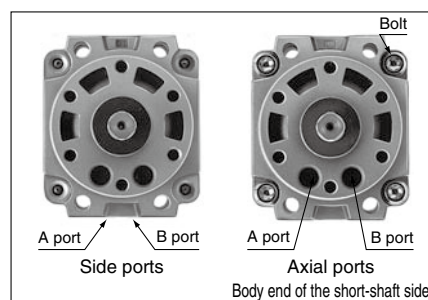
W	Double shaft (long shaft with key and short shaft with four flats)
----------	--

Rotating angle

Classification	Symbol	Single vane	Double vane
Standard	90	90°	90°
	180	180°	—
	270	270°	—
Semi-standard	100	100°	100°
	190	190°	—
	280	280°	—

Connecting port position

Nil	Side ports
E	Axial ports



Vane type

S	Single vane
D	Double vane

All other specifications are the same as the standard products Series CRB1.
For details, refer to **the WEB catalog** or Best Pneumatics No. 4.

ATEX Compliant

Rotary Actuator: Vane Type

Series 56-CRB1

Sizes: 50, 63, 80, 100



II 3G

84°C (T6) Ta 5°C to 40°C
104°C (T4) Ta 40°C to 60°C

How to Order

Without magnet

56-CRB1

B	W	80	-90	S	-	-
----------	----------	-----------	------------	----------	----------	----------

With magnet

56-CDRB1

B	W	80	-90	S	-	-
----------	----------	-----------	------------	----------	----------	----------

ATEX category 3

With auto switch unit
Built-in magnet

Mounting

B	Basic
L	Foot

Shaft type

W	Double shaft (long shaft key & four chamfers)
----------	---

Rotating angle

Classification	Symbol	Single vane	Double vane
Standard	90	90°	90°
	180	180°	—
	270	270°	—
Semi-standard	100	100°	100°
	190	190°	—
	280	280°	—

Size

50
63
80
100

Thread Port

Nil	Rc
-XF	G
-XN	NPT

Connecting port position

Nil	Side ports
E	Axial ports

Vane type

S	Single vane
D	Double vane

All other specifications are the same as the standard products Series CRB1. For details, refer to **the WEB catalog** or Best Pneumatics No. 4.

Refer to page 69 for applicable auto switches.

ATEX Compliant

Rotary Actuator: Vane Type

Series 55-CRB2

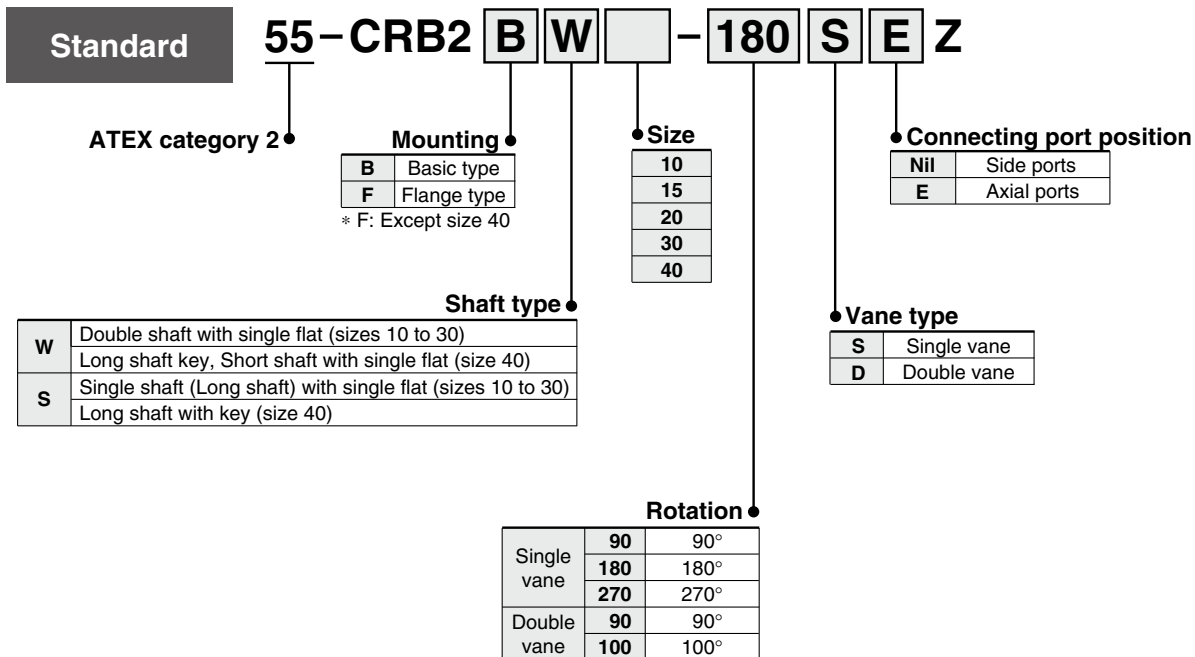
Sizes: 10, 15, 20, 30, 40



II 2Gc

130°C (T4) Ta 5°C to 40°C
150°C (T3) Ta 40°C to 60°C

How to Order



All other specifications are the same as the standard products Series CRB2.
For details, refer to **the WEB catalog** or Best Pneumatics No. 4.

ATEX Compliant

Rotary Actuator: Vane Type

Series 56-CRB2

Sizes: 10, 15, 20, 30, 40



II 3G

100°C (T5) Ta 5°C to 40°C
120°C (T4) Ta 40°C to 60°C

How to Order

Without magnet 56-CRB2 **B** **W** **□** - **180** **S** **E** **Z**

With magnet 56-CDRB2 **B** **W** **□** - **180** **S** **Z**

• **Connecting port position**

Nil	Side ports
E	Axial ports

• **Size**

10
15
20
30
40

• **Vane type**

S	Single vane
D	Double vane

• **Rotation**

Single vane	90	90°
	180	180°
	270	270°
Double vane	90	90°
	100	100°

• **Mounting**

B	Basic
F	Flange

* F: Except size 40

• **Shaft type**

W	Double shaft with single flat (sizes 10 to 30)
	Long shaft with key, short shaft with single flat (size 40)
S*	Single shaft (Long shaft) with single flat (sizes 10 to 30)
	Long shaft with key (size 40)

* Cannot be selected when mounting an auto switch

• **With auto switch unit Built-in magnet**

• **ATEX category 3**

All other specifications are the same as the standard products Series CRB2.
For details, refer to the **WEB catalog** or Best Pneumatics.

Refer to page 69 for applicable auto switches.

ATEX Compliant

Rotary Actuator: Free Mount Type

Series 55-CRBU2

Sizes: 10, 15, 20, 30, 40



II 2Gc

130°C (T4) Ta 5°C to 40°C
150°C (T3) Ta 40°C to 60°C

How to Order

Standard

55-CRBU2 **W** **180** **S** **E** **Z**

ATEX category 2 •

Free mount type •

Shaft type •

Size

10
15
20
30
40

Connecting port position

Nil	Side ports
E	Axial ports

Vane type

S	Single vane
D	Double vane

Rotation

Single vane	90	90°
	180	180°
	270	270°
Double vane	90	90°
	100	100°

W	Double shaft with single flat (sizes 10 to 30) Long shaft with key, short shaft with single flat (size 40)
S	Single shaft (Long shaft) with single flat (sizes 10 to 30) Long shaft with key (size 40)

All other specifications are the same as the standard products Series CRBU2.
For details, refer to **the WEB catalog** or Best Pneumatics No. 4.

ATEX Compliant

Rotary Actuator: Free Mount Type

Series 56-CRBU2

Sizes: 10, 15, 20, 30, 40



II 3G

100°C (T5) Ta 5°C to 40°C
120°C (T4) Ta 40°C to 60°C

How to Order

Without magnet
56- CRBU2 W [] - 180 S E Z

With magnet
56- CDRBU2 W [] - 180 S Z

• **Connecting port position**

Nil	Side ports
E	Axial ports

• **Size**

10
15
20
30
40

• **Vane type**

S	Single vane
D	Double vane

• **Rotation**

Single vane	90	90°
	180	180°
	270	270°
Double vane	90	90°
	100	100°

• **Shaft type**

W	Double shaft with single flat (sizes 10 to 30) Long shaft with key, short shaft with single flat (size 40)
S*	Single shaft (Long shaft) with single flat (sizes 10 to 30) Long shaft with key (size 40)

• **ATEX category 3**

• **With auto switch unit Built-in magnet**

• **Free mount type**

* Cannot be selected when mounting an auto switch

All other specifications are the same as the standard products Series CRBU2.
For details, refer to the **WEB catalog** or Best Pneumatics.

Refer to page 69 for applicable auto switches.

ATEX Compliant

Compact Rotary Actuator Rack & Pinion Type

Series 55-CRQ2



CE  II 2Gc 70°C (T6) Ta 0°C to 40°C
90°C (T5) Ta 40°C to 60°C

How to Order

Without magnet 55-CRQ2B **S** **20** **90**

With magnet 55-CDRQ2B **S** **20** **90**

ATEX category 2

Built-in magnet for auto switch

Shaft type

S	Single shaft
W	Double shaft

Size

10
15
20
30
40

Port thread

Size	Port thread	
10, 15	Nil	M5
20, 30, 40	Nil	Rc 1/8
	TF	G 1/8
	TN	NPT 1/8
	TT	NPTF 1/8

Cushion

Symbol	Cushion	Size				
		10	15	20	30	40
Nil	Without cushion	—	—	●	●	●
	Rubber cushion	●	●	—	—	—
C	Air cushion	—	—	●	●	●

Rotation

90	80° to 100°
180	170° to 190°

All other specifications are the same as the standard products Series CRQ2.
For details, refer to the **WEB catalog** or Best Pneumatics No. 4.

Refer to page 69 for applicable auto switches.

ATEX Compliant

Compact Rotary Actuator Rack & Pinion Type

Series 56-CRQ2



II 3G

60°C (T6) Ta 0°C to 40°C
80°C (T6) Ta 40°C to 60°C

How to Order

Without magnet 56-CRQ2B **S** **20** **90**

With magnet 56-CDRQ2B **S** **20** **90**

ATEX category 3

Built-in magnet for auto switch

Shaft type

S	Single shaft
W	Double shaft

Size

10
15
20
30
40

Port thread

Size	Port thread	
10, 15	Nil	M5
20, 30, 40	Nil	Rc 1/8
	TF	G 1/8
	TN	NPT 1/8
	TT	NPTF 1/8

Cushion

Symbol	Cushion	Size				
		10	15	20	30	40
Nil	Without cushion	—	—	●	●	●
	Rubber cushion	●	●	—	—	—
C	Air cushion	—	—	●	●	●

Rotation

90	80° to 100°
180	170° to 190°

All other specifications are the same as the standard products Series CRQ2.
For details, refer to **the WEB catalog** or Best Pneumatics No. 4.

Refer to page 69 for applicable auto switches.

ATEX Compliant

Booster Regulator

Series 56-VBA

10A to 43A



RoHS

CE  II 3 GD c T6 Ta 2°C to 50°C

How to Order

56-VBA **40A** - **04** - **04** - **04**

ATEX category 3

Body size

10A	1/4, Handle-operated type	Pressure increase ratio: Twice
11A	1/4, Handle-operated type	Pressure increase ratio: 2 to 4 times
20A	3/8, Handle-operated type	
40A	1/2, Handle-operated type	
22A	3/8, Air-operated type	Pressure increase ratio: Twice
42A	1/2, Air-operated type	
43A	1/2, Max. operating pressure 1.6 Mpa	

Thread type ^{Note)}

Symbol	Thread type
Nil	Rc
F	G
N	NPT
T	NPTF

Note) Thread types apply to the IN, OUT, and EXH ports of the VBA1□A and to the IN, OUT, EXH, and gauge ports of the VBA2□A and VBA4□A. The gauge ports of the VBA1□A are Rc thread type regardless of the thread type indication.

•Semi-standard

Symbol	Specifications
Nil	Standard product
Z ^{Note)}	Pressure unit on the product name label and pressure gauge: psi

Note) Thread type: NPT, NPTF

Under the new measurement law, the pressure unit of "psi" on the pressure gauges cannot be used in Japan.

•Options

Symbol	Options
Nil	None
G	Pressure gauge
N	Silencer
S	High-noise reduction silencer ^{Note)}
GN	Pressure gauge, Silencer
GS	Pressure gauge, High-noise reduction silencer ^{Note)}
LN	Elbow silencer ^{Note)}
LS	Elbow high-noise reduction silencer ^{Note)}
GLN	Pressure gauge, Elbow silencer ^{Note)}
GLS	Pressure gauge, Elbow high-noise reduction silencer ^{Note)}

Note) Refer to "Combination of Thread Type and Options."

•Port size

Symbol	Port size	Applicable series
02	1/4"	VBA1□A
03	3/8"	VBA2□A
04	1/2"	VBA4□A

Combination of Thread Type and Options

Body size	Thread type	Options										Semi-standard	
		Nil	G	N	S	GN	GS	LN	LS	GLN	GLS	Nil	-Z
10A 11A	Nil	●	●	●	●	●	●	●	●	●	●	●	—
	F	●	●	●	●	●	●	●	●	●	●	●	—
	N	●	●	●	—	●	—	●	—	●	—	●	●
	T	●	●	●	—	●	—	●	—	●	—	●	●
20A 22A	Nil	●	●	●	●	●	●	/				●	—
	F	●	●	●	●	●	●					●	—
	N	●	●	●	●	●	●					●	●
	T	●	●	●	●	●	●					●	●
40A 42A 43A	Nil	●	●	●	●	●	●	/				●	—
	F	●	●	●	●	●	●					●	—
	N	●	●	●	●	●	●					●	●
	T	●	●	●	●	●	●					●	●

All other specifications are the same as the standard products Series VBA. For details, refer to the **WEB catalog** or Best Pneumatics No. 5.

ATEX Compliant

Digital Pressure Switch for Air

Series 56-ISE70



CE  II 3G Ex nA II T5 X 0°C ≤ Ta ≤ 50°C
II 3D tD A22 IP67 T53°C X

How to Order

1MPa

56 - ISE70 - 02 - 43 - M

ATEX category 3

Piping specifications

02	Rc1/4
N02	NPT1/4
F02	G1/4 (ISO1179)

Output specifications

27	2 settings NPN open collector 2 outputs (Pin no.: 2, 4)
43	Fixed setting: (The pressure set point for switching the output signal is common to NPN and PNP.) NPN open collector 1 output (Pin no.: 4) + PNP open collector 1 output (Pin no.: 2)
65	Fixed setting PNP open collector 1 output (Pin no.: 4)
67	2 settings PNP open collector 2 outputs (Pin no.: 2, 4)

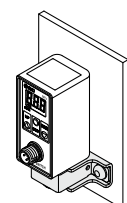
Unit specifications

Nil	With display unit switching function ^{Note 1)}
M	Fixed SI unit ^{Note 2)}
P	Pressure unit: psi (Initial value) With display unit switching function ^{Note 1)}

Note 1) Under the New Measurement Law, sales of switches with the unit switching function are not allowed for use in Japan. (Initial value: MPa)

Note 2) Fixed unit: Mpa

Option 2

Nil	None
A	With bracket  Note) Mounting screws are not included.

Option 1

Nil	None
S	Lead wire with M12 connector (5 m), straight
L	Lead wire with M12 connector (5 m), right-angled

Specifications

Model	56-ISE70
Rated pressure range	0 to 1 MPa
Pressure display range/Set pressure range	-0.1 to 1 MPa
Withstand pressure	1.5 MPa
Pressure display resolution/Minimum unit setting	0.01 MPa
Applicable fluid	Air, Non-corrosive gas, Non-flammable gas
Power supply voltage	12 to 24 VDC±10%, Ripple (p-p) 10% or less (with power supply polarity protection)
Current consumption	55 mA or less (at no load)

Follow the instructions given below when handling the pressure switch.

- Operating temperature range is 0 to 50°C
- Do not expose the pressure switch to heat radiation from a heat source located nearby. It can cause malfunction.
- Do not expose the pressure switch/connector/cable to vibration and impact. Otherwise it can cause damage or malfunction.
- Protect the product from direct sunlight or UV light using a suitable protective cover.
- Do not disconnect the M12 connector while energized.
- Use only an ATEX approved M12 connector.
- For cleaning this product, use a clean and damp cloth, to prevent the buildup of an electrostatic charge.
- Ground properly to prevent the buildup of an electrostatic charge.

All other specifications are the same as the standard products Series ISE70.
For details, refer to the **WEB catalog** or Best Pneumatics No. 6.

ATEX Compliant

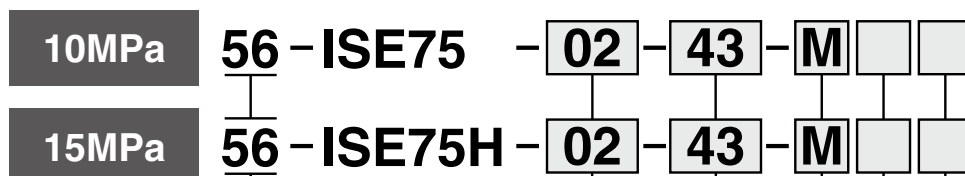
Digital Pressure Switch for General Fluids

Series 56-ISE75/75H



CE  II 3G Ex nA II T4 X -5°C ≤ Ta ≤ 50°C
II 3D tD A22 IP67 T54°C X

How to Order



ATEX category 3

Piping specifications

02	Rc1/4
N02	NPT1/4
F02	G1/4 (ISO1179)

Output specifications

27	2 settings NPN open collector 2 outputs (Pin no.: 2, 4)
43	Fixed setting: (The pressure set point for switching the output signal is common to NPN and PNP.) NPN open collector 1 output (Pin no.: 4) + PNP open collector 1 output (Pin no.: 2)
65	Fixed setting PNP open collector 1 output (Pin no.: 4)
67	2 settings PNP open collector 2 outputs (Pin no.: 2, 4)

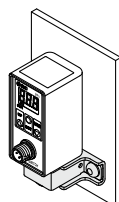
Unit specifications

Nil	With display unit switching function ^{Note 1)}
M	Fixed SI unit ^{Note 2)}
P	Pressure unit: psi (Initial value) With display unit switching function ^{Note 1)}

Note 1) Under the New Measurement Law, sales of switches with the unit switching function are not allowed for use in Japan. (Initial value: MPa)

Note 2) Fixed unit: Mpa

Option 2

Nil	None
A	With bracket  Note) Mounting screws are not included.

Option 1

Nil	None
S	Lead wire with M12 connector (5 m), straight
L	Lead wire with M12 connector (5 m), right-angled

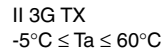
Specifications

Model	56-ISE75	56-ISE75H
Rated pressure range	0 to 10 MPa	0 to 15 MPa
Pressure display range/Set pressure range	0.4 to 10 MPa	0.5 to 15 MPa
Withstand pressure	30 MPa	45 MPa
Pressure display resolution/Minimum unit setting	0.1 MPa	
Applicable fluid	Fluid or gas that will not corrode SUS304, SUS430 and SUS630	
Power supply voltage	12 to 24 VDC±10%, Ripple (p-p) 10% or less (with power supply polarity protection)	
Current consumption	55 mA or less (at no load)	

Follow the instructions given below when handling the pressure switch.

- Operating temperature range is - 5 to 50°C
- Do not expose the pressure switch to heat radiation from a heat source located nearby. It can cause malfunction.
- Do not expose the pressure switch/connector/cable to vibration and impact. Otherwise it can cause damage or malfunction.
- Protect the product from direct sunlight or UV light using a suitable protective cover.
- Do not disconnect the M12 connector while energized.
- Use only an ATEX approved M12 connector.
- For cleaning this product, use a clean and damp cloth, to prevent the buildup of an electrostatic charge.
- Ground properly to prevent the buildup of an electrostatic charge.

All other specifications are the same as the standard products Series ISE75/ISE75H.
For details, refer to **the WEB catalog** or Best Pneumatics No. 6.



Air operated

ATEX category 3

Valve size

Valve type

Port size

Body option

Nil	Standard (Copper alloy)
Note) S	Stainless steel body

Note) Threaded type only

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

Options

Nil	None
Note) B	With bracket
L	With indicator light(visual verification of operation)
Note) BL	With bracket and indicator light(visual verification of operation)

Note) Brackets (for valve size 1/2/3/4 only) will be assembled at the time of shipment.
Bracket part no.
Valve size 1: VN1-A16 (with thread)
Valve size 2 to 4: VN□-16
 ↑
 2 to 4



ATEX Compliant Valve for Water and Chemical Base Fluids (2/3 Port Air Operated Valve) Series VCC



CE Ex II 2GD c 75°C T6 X +5°C ≤ Ta ≤ +50°C

How to Order

Valve

VCC1 **2** - **00**

Passage number

2	2 port valve
3	3 port valve Note)
2D	2 port/Diaphragm type (Applicable for 2 liquid paint)

Note) Pressure cannot be applied from a 3 port valve RETURN port.

Port size

00	For manifold mounting
02	Rc1/4 (for single unit) Note)
02F	G1/4 (for single unit) Note)

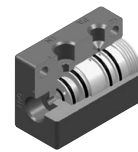
Note) Part number for sub-base
For 2 port: VCC12-S-⁰²_{02F} [Rc1/4]
For 3 port: VCC13-S-⁰²_{02F} [Rc1/4]



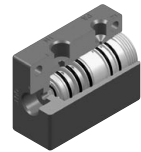
VCC12(D)-00



VCC13-00



VCC12(D)-02(F)



VCC13-02(F)

Manifold

Standard

VV **M** CC1- **06** **06** **C4**

Type (Passage number)

2	2 port valve, Cleaning valve
3	3 port valve
M	2/3 port valves mixed mounting

Pilot port fitting size

C4	ø4 One-touch fitting (Antistatic)
C6	ø6 One-touch fitting (Antistatic)

2 port valve mountable number

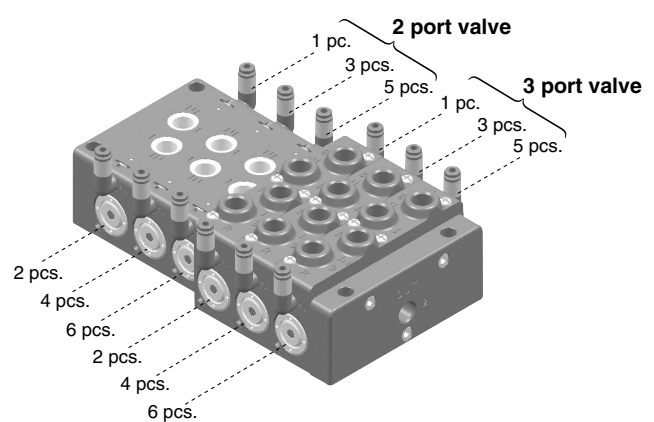
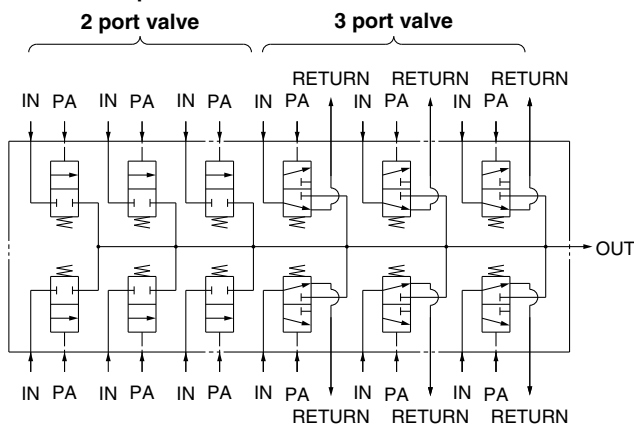
00	No 2 port valves used
02	2 pcs. (colours)
04	4 pcs. (colours)
⋮	⋮

3 port valve mountable number

00	No 3 port valves used
02	2 pcs. (colours)
04	4 pcs. (colours)
⋮	⋮

Note) Maximum mountable valve number: 40 pcs. (total of 2 port and 3 port valves)

Circuit example



All other specifications are the same as the standard products Series VCC. For details, refer to the **WEB catalog** or Best Pneumatics No. 7.

How to Order

Manifold

With gate valve **VV** **M** **CC1** - **02** **06** **C4** - **G** **04**

Passage number

2	2 port valve, Cleaning valve
M	2/3 port valves mixed mounting

2 port valve mountable number

00	No 2 port valves used
02	2 pcs. (colours)
04	4 pcs. (colours)
⋮	⋮

3 port valve mountable number

00	No 3 port valves used
02	2 pcs. (colours)
04	4 pcs. (colours)
⋮	⋮

Note) Maximum mountable valve number: 40 pcs.
(total of 2 port, 3 port and gate valves)

Gate valve and cleaning valve mountable number

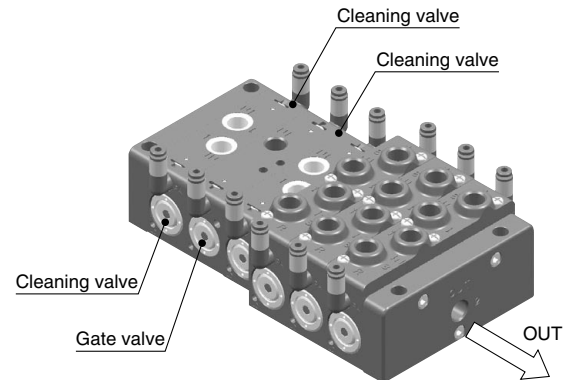
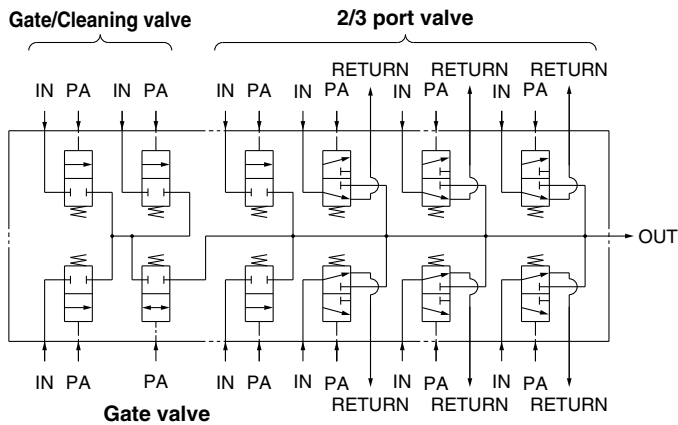
02	Cleaning valve (2 port valve): 1 pc. + Gate valve: 1 pc.
04	Cleaning valve (2 port valve): 3 pcs. + Gate valve: 1 pc.
06	Cleaning valve (2 port valve): 5 pcs. + Gate valve: 1 pc.

Pilot port fitting size

C4	ø4 One-touch fitting (Antistatic)
C6	ø6 One-touch fitting (Antistatic)

* The gate valve and cleaning valve (2 port valve) are not included.
They are ordered separately.
(Gate valve is equivalent to 2 port valve.)
* When cleaning valve number is an even number, use the blanking plug for 2 port valve.

Circuit example



All other specifications are the same as the standard products Series VCC.
For details, refer to the **WEB catalog** or Best Pneumatics No. 7.

ATEX Compliant Air operated type

Threaded Type

Series 55-LVA



55-LVA10 and 55-LVA12
 II 2G c IIB T6 X Ta 0°C to +50°C
 II 2G c IIB TXX Ta 0°C to +60°C
 Special condition X "Protect from impact"

55-LVA2□, 55-LVA3□, 55-LVA4□, 55-LVA5□,
 55-LVA6□ and 55-LVA200
 II 2GD c IIB 80°C T6 X Ta 0°C to +50°C
 II 2GD c IIB TXX Ta 0°C to +60°C
 Special condition X "Protect from impact"

Note) The manifold type is not available with ATEX certification

How to Order Valves (Single Type)

55-LVA 2 0 - 02 - A

ATEX category 2

Body class

Symbol	Body class	Orifice dia.
1	1	ø2
2	2	ø4
3	3	ø8
4	4	ø12
5	5	ø20
6	6	ø22

Valve type

0	N.C.
1	N.O.
2	Double acting

Note) Refer to "Series Variations" in the table below for valve type combinations.

Port size

Symbol	Port size	Body class
01	1/8	1
02	1/4	1
01	1/8	2
02	1/4	2
02	1/4	3
03	3/8	3
03	3/8	4
04	1/2	4
04	1/2	5
06	3/4	5
10	1	6

Options

Nil	None
1	With flow rate adjustment
2	With bypass (PFA body only)
3	With flow rate adjustment & bypass (PFA body only)
4	With indicator

Note) Refer to "Variations" in the table below for option combinations. Options can not be combined each other.

Material

Symbol	Body	Actuator section End plate	Diaphragm	Applicable option				Note
				1	2	3	4	
A	SUS	PPS	PTFE	●			●	—
B	PPS	PPS	PTFE	●			●	55-LVA10 to 40
C	PFA	PPS	PTFE	●	●	●	●	55-LVA20 to 40
D	SUS	PPS	NBR	●			●	55-LVA10 to 50
E	SUS	PPS	EPR	●			●	55-LVA10 to 50
F	PFA	PVDF	PTFE					Hydrofluoric acid compatible Only 55-LVA40
G	PPS	PPS	NBR	●			●	55-LVA10 to 40
H	PPS	PPS	EPR	●			●	55-LVA10 to 40
N	PFA	PPS	PTFE	●	●	●	●	Ammonium hydroxide compatible 55-LVA20 to 40

Specifications

Model	55-LVA10	55-LVA20	55-LVA30	55-LVA40	55-LVA50	55-LVA60
Fluid temperature (°C)	Temperature class T6	0 to 50				
	Temperature class TX	0 to 100				
Ambient temperature (°C)	Temperature class T6	0 to 50				
	Temperature class TX	0 to 60				

Thread type

Symbol	Thread type
Nil	Rc
N	NPT
F	G

Series Variations

Type	Symbol	Model	Orifice dia.	Port size	Body material (Note)	Valve type	55-LVA10	55-LVA20	55-LVA30	55-LVA40	55-LVA50	55-LVA60
							ø2	ø4	ø8	ø12	ø20	ø22
Basic		N.C.	1/8	1/4	SUS316	N.C.	○	○	○	○	○	○
							○	○	○	○	○	○
							○	○	○	○	○	○
With flow rate adjustment		N.C.	1/8	1/4	SUS316	N.C.	—	○	○	○	○	○
							—	○	○	○	○	○
With by-pass		N.C.	1/8	1/4	SUS316	N.C.	—	—	○	○	○	○
							—	—	○	○	○	○
With flow rate adjustment & by-pass		N.C.	1/8	1/4	SUS316	N.C.	—	—	○	○	○	○
							—	—	○	○	○	○
With indicator		N.C.	1/8	1/4	SUS316	N.C.	—	—	○	○	○	○
							—	—	○	○	○	○

Note) Refer to the "Material" table for the applicable optional body materials.

All other specifications are the same as the standard products Series LVA. For details, refer to the **WEB catalog** or Best Pneumatics No. 7.

ATEX Compliant Air operated type



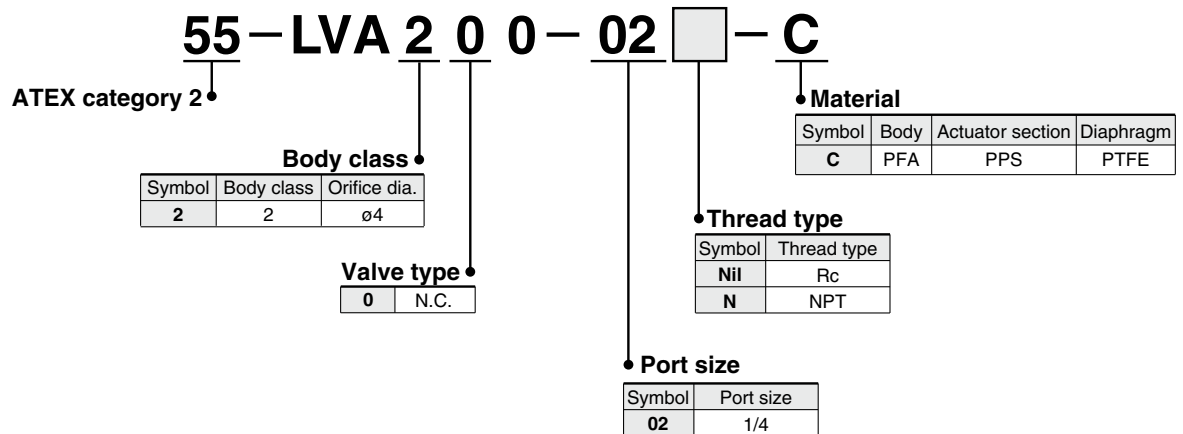
Threaded Type

Series 55-LVA

55-LVA10 and 55-LVA12
II 2G c IIB T6 X Ta 0°C to +50°C
II 2G c IIB TXX Ta 0°C to +60°C
Special condition X "Protect from impact"
55-LVA2□, 55-LVA3□, 55-LVA4□, 55-LVA5□,
55-LVA6□ and 55-LVA200
II 2GD c IIB 80°C T6 X Ta 0°C to +50°C
II 2GD c IIB TXX Ta 0°C to +60°C
Special condition X "Protect from impact"

Note) The manifold type is not available with ATEX certification

How to Order Valves



All other specifications are the same as the standard products Series LVA.
For details, refer to **the WEB catalog** or Best Pneumatics No. 7.

ATEX Compliant Process Pump

Automatically operated type (Internal switching type)/

Air operated type (External switching type)

Series 55-PA3000/5000



For 55-PA3□□0: II 2 GD c T6 Ta 0°C to +60°C

For 55-PA3□□3: II 2 GD c T5 Ta 0°C to +60°C

For 55-PA5□□□: II 2 GD c T6 Ta 0°C to +60°C

For 55-PA5□□3: II 2 GD c T6 Ta 0°C to +60°C

How to Order

55-PA 3 1 1 0 - 03 -

ATEX category 2

Body size

Symbol	Body size
3	3/8 standard
5	1/2 standard

Liquid contact body material

Symbol	Body material
1	ADC12 (Aluminum)
2	SCS14 (Stainless steel)

Diaphragm material

Symbol	Diaphragm material	Applicable actuation	
		Automatically operated type	Air operated type
1	PTFE	●	●
2	NBR	●	—

* Dimensions are the same as the standard products.

Actuation

Symbol	Actuation
0	Automatically operated type
3	Air operated type

Options

Symbol	Options	Applicable actuation	
		Automatically operated type	Air operated type
Nil	None	●	●
N	With silencer	●	—

* A silencer of 2504-002 (NPT: 2504-N002) is provided.

Port size

Symbol	Port size	Applicable model	
		PA3000	PA5000
03	3/8"	●	—
04	1/2"	—	●
06	3/4"	—	●

Thread type

Symbol	Type
Nil	Rc
N	NPT
F	G
T	NPTF

All other specifications are the same as the standard products Series PA3000/5000. For details, refer to the **WEB catalog** or Best Pneumatics No. 7.

ATEX Compliant Process Pump

Automatically operated type (Internal switching type)/

Air operated type (External switching type)

Series 56-PA3000/5000



CE II 3 GD c T6 Ta 0°C to +60°C

How to Order

56-PA 3 1 1 0 - 03 -

ATEX category 3

Body size

Symbol	Body size
3	3/8 standard
5	1/2 standard

Liquid contact body material

Symbol	Body material
1	ADC12 (Aluminum)
2	SCS14 (Stainless steel)

Diaphragm material

Symbol	Diaphragm material	Applicable model	
		Automatically operated type	Air operated type
1	PTFE	●	●
2	NBR	●	—

* Dimensions are the same as the standard products.

Actuation

Symbol	Actuation
0	Automatically operated type
3	Air operated type

Options

Symbol	Options	Applicable model	
		Automatically operated type	Air operated type
Nil	None	●	●
N	With silencer	●	—

Port size

Symbol	Port size	Applicable model	
		PA3000	PA5000
03	3/8"	●	—
04	1/2"	—	●
06	3/4"	—	●

Thread type

Symbol	Type
Nil	Rc
N	NPT
F	G
T	NPTF

All other specifications are the same as the standard products Series PA3000/5000. For details, refer to the **WEB catalog** or Best Pneumatics No. 7.

ATEX Compliant

Pneumatic-Pneumatic Positioner

Series 55-IP5000/5100



CE II 2GDc T4-T6

How to Order

55-IP5 000-010

ATEX category 2

Positioner type

000	Lever type
100	Rotary type

Input pressure

0	0.2 to 1.0 MPa (Standard)
1	1/2 split 0.02 to 0.06, 0.06 to 0.1 MPa

Pressure gauge (SUP, OUT1)

0	Not provided
1	0.2 MPa
2	0.3 MPa
3	1.0 MPa

Indication of opening (Note)

0	Not provided
1	Indicated

Note) 55-IP5000 is available only with option "0" (no indication).

Ambient temperature

Nil	-20 to 80°C (Standard)
T	-5 to 100°C (High temperature)
L	-30 to 60°C (Low temperature)

Note) Please refer to table below

Accessories (Note 1)

Nil	Without accessory (standard)	With standard lever (10 to 85 mm stroke) for IP5000
A	With ø0.7 output restrictor integrated pilot valve	Common to IP5000 and IP5100 small capacity actuators
B	With ø1.0 output restrictor integrated pilot valve	
C	With fork lever type fitting M	Only for IP5100
D	With fork lever type fitting S	
E	With lever unit for a 35 to 100 mm stroke	Only for IP5100 (Note 2)
F	With lever unit for a 50 to 140 mm stroke	

Note 1) If multiple accessories are required, they should be indicated in alphabetical order.
ex. 55-IP5000-010-AD

Note 2) For "E" and "F", standard lever is not provided.

Pressure gauge/Air port

Nil	Rc (Standard)
N	NPT
F	G

Specifications

Classification	Ambient temperature range		
	Low temperature 55-IP5000-□□□□L□□□	Standard 55-IP5000-□□□□□□□□	High temperature 55-IP5000-□□□□T□□□
II 2GD c T4	—	—	-5°C ≤ Ta ≤ 100°C
II 2GD c T5	—	-20°C ≤ Ta ≤ 80°C	-5°C ≤ Ta ≤ 80°C
II 2GD c T6	-30°C ≤ Ta ≤ 60°C	-20°C ≤ Ta ≤ 60°C	-5°C ≤ Ta ≤ 60°C

All other specifications are the same as the standard products Series IP5000/5100.
For details, refer to the **WEB catalog** or Series IP5000/5100 (CAT.ES60-13).

ATEX Compliant

Pneumatic-Pneumatic Positioner

Series 56-IP5000/5100



CE  II 3GDc T4-T6

How to Order

56-IP5 000-010- - -

ATEX category 3

Positioner type

000	Lever type
100	Rotary type

Input pressure

0	0.2 to 1.0 MPa (Standard)
1	1/2 split 0.02 to 0.06, 0.06 to 0.1 MPa

Pressure gauge (SUP, OUT1)

0	Not provided
1	0.2 MPa
2	0.3 MPa
3	1.0 MPa

Indication of opening Note)

0	Not provided
1	Indicated

Note) 55-IP5000 is available only with option "0" (no indication).

Ambient temperature

Nil	-20 to 80°C (Standard)
T	-5 to 100°C (High temperature)
L	-30 to 60°C (Low temperature)

Note) Please refer to table below

Accessories Note 1)

Nil	Without accessory (standard)	With standard lever (10 to 85 mm stroke) for IP5000
A	With ø0.7 output restrictor integrated pilot valve	Common to IP5000 and IP5100 small capacity actuators
B	With ø1.0 output restrictor integrated pilot valve	
C	With fork lever type fitting M	Only for IP5100
D	With fork lever type fitting S	
E	With lever unit for a 35 to 100 mm stroke	Only for IP5100 Note 2)
F	With lever unit for a 50 to 140 mm stroke	

Note 1) If multiple accessories are required, they should be indicated in alphabetical order.
ex. 56-IP5000-010-AD

Note 2) For "E" and "F", standard lever is not provided.

Pressure gauge / Air port

Nil	Rc (Standard)
N	NPT
F	G

Specifications

Classification	Ambient temperature range		
	Low temperature 56-IP5000-□□□□□□	Standard 56-IP5000-□□□□□□	High temperature 56-IP5000-□□□□□□
II 3GD c T4	—	—	-5°C ≤ Ta ≤ 100°C
II 3GD c T5	—	-20°C ≤ Ta ≤ 80°C	-5°C ≤ Ta ≤ 80°C
II 3GD c T6	-30°C ≤ Ta ≤ 60°C	-20°C ≤ Ta ≤ 60°C	-5°C ≤ Ta ≤ 60°C

All other specifications are the same as the standard products Series IP5000/5100.
For details, refer to the **WEB catalog** or Series IP5000/5100 (CAT.ES60-13).

ATEX Compliant Electro-Pneumatic Positioner (Lever type/Rotary type)

Series IP6000-X14/6100-X14

CE  II 2G Ex ib IIC T5/T6

How to Order

IP6 **000** - 0 **1** 0 - **X14**

Positioner type

000	Lever type
100	Rotary type

Pressure gauge (SUP, OUT1)

1	0.2 MPa
2	0.3 MPa
3	1.0 MPa

Accessories Note)

Nil	Without accessory (standard)	With standard lever (10 to 85 mm stroke) for IP6000
A	With ø0.7 output restrictor integrated pilot valve	Common to IP6000 and 6100 small capacity actuators
B	With ø1.0 output restrictor integrated pilot valve	
C	With fork lever type fitting MX	Only for IP6100
D	With fork lever type fitting SX	
E	With lever unit for a 35 to 100 mm stroke	Only for IP6000
F	With lever unit for a 50 to 140 mm stroke	
G	With compensation spring (A)	Common to IP6000 and 6100

Note) If multiple accessories are required, they should be indicated in alphabetical order.

ex. IP6000-011-AG-X14

Specifications

Item	Type	IP6000		IP6100	
		Lever type lever		Rotary type cam	
		Single acting	Double acting	Single acting	Double acting
Input current	4 to 20 mADC (Standard) ^{Note 1)}				
Input resistance	235 ± 15Ω (4 to 20 mADC)				
Supply air pressure	0.14 to 0.7 MPa				
Standard stroke	10 to 85 mm (External lever allowable runout angle 10° to 30°)			60° to 100° ^{Note 2)}	
Sensitivity	Within 0.1% F.S.	Within 0.5% F.S.			
Linearity	Within ± 1% F.S.	Within ± 2% F.S.			
Hysteresis	Within 0.75% F.S.	Within 1% F.S.			
Repeatability	Within ± 0.5% F.S.				
Thermal coefficient	Within 0.1% F.S./°C				
Output flow rate	^{Note 3)} 80 L/min (ANR) or more (SUP = 0.14 MPa)				
Air consumption	^{Note 3)} Within 5 L/min (ANR) (SUP = 0.14 MPa)				
Ambient and using fluid Temperature	-20°C to 80°C (T5) -20°C to 60°C (T6)				
Explosion protected Construction	ATEX intrinsically safe explosion proof structure ( 0344  II 2G Ex ib II C T5/T6) Approval No. KEMA 03 ATEX1119				
Air connection port	1/4 NPT female screw				
Electric wiring connection port	M20 x 1.5				
Material	Aluminium diecast for the body				
Weight	Approx. 2.4 kg				
Classification of degree of protection	JIS F8007 IP55 (Conform to IEC 60529)				
Parameters (Current circuit)	Ui ≤ 28V, Ii ≤ 125mA, Pi ≤ 1.2W, Ci ≤ OnF, Li ≤ OmH				

Note 1) 1/2 split range is possible with the standard type (by adjusting the span).

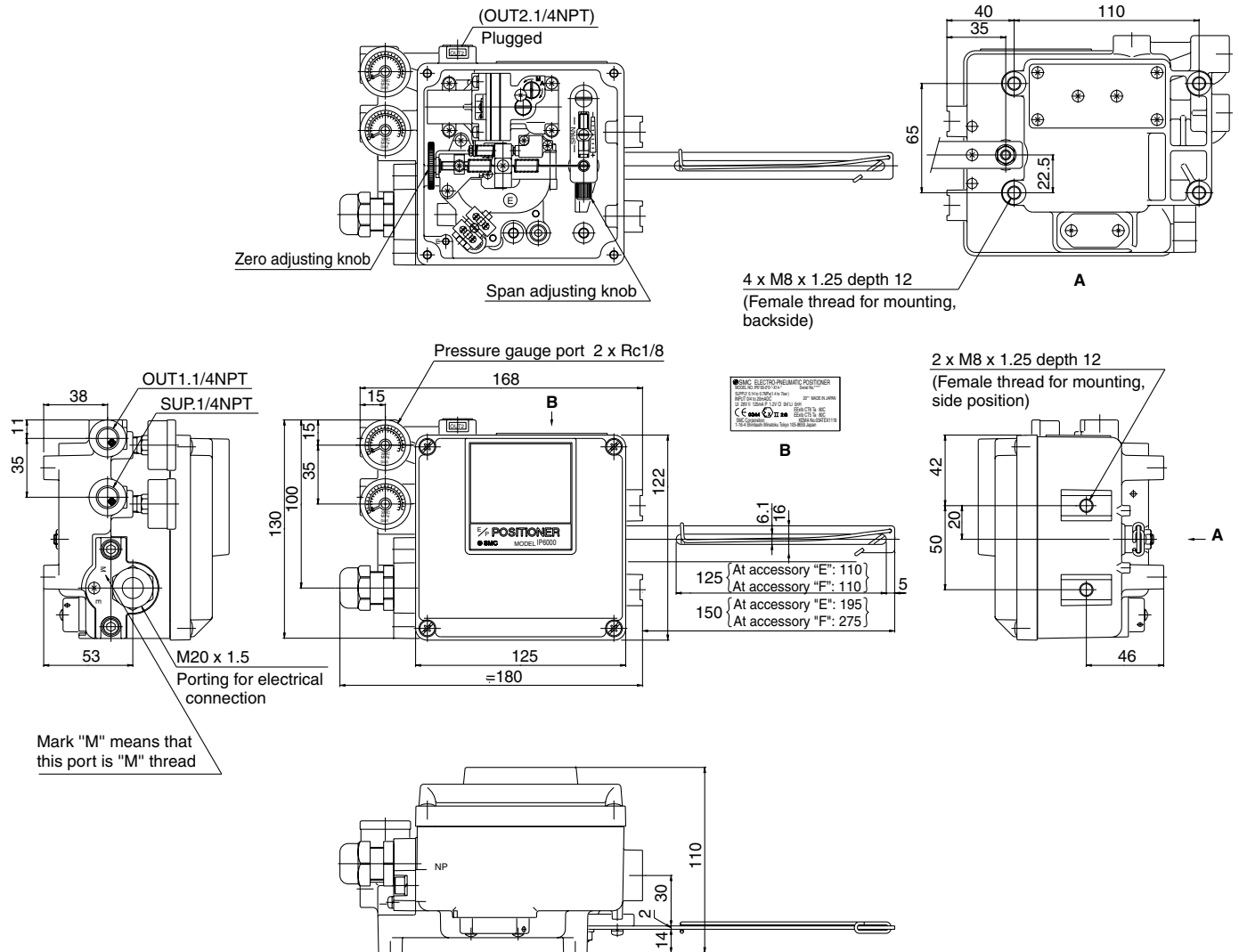
Note 2) The stroke is adjustable in 0° to 60° and 0° to 100°.

Note 3) Standard air (JIS B0120): temp. 20°C, absolute press. 760 mmHg, ratio humidity 65%.

All other specifications are the same as the standard products Series IP6000/6100.
For details, refer to **the WEB catalog** or Series IP6000/6100 (CAT.ES60-11).

Dimensions/IP6000

IP6000-0□0-□-X14 (Lever type)



IP6100-0□0-□-X14 (Rotary type)



ATEX Compliant Electro-Pneumatic Positioner (Lever type/Rotary type)

Series IP8000-X14/8100-X14



CE II 2G Ex ib IIC T5/T6

How to Order

ATEX Directive Intrinsically
Safe Explosion Proof

IP8 000 - 0 1 0 - [] - X14 - []

Positioner type

000	Electro-pneumatic lever type
100	Electro-pneumatic rotary type

Pressure gauge

Symbol	Pressure
0	Not provided
1	0.2 MPa
2	0.3 MPa
3	1.0 MPa

Option Note 7)

Symbol	Option	Applicable model	
		IP8000-X14	IP8100-X14
Nil	—	●	●
L	Low temperature (−40 to 60°C)	●	●
W	With internal opening indicator plate	—	●

ATEX directive compliance and connection

X14	ATEX directive category 2 Intrinsically safe explosion-proof item Air connection port: 1/4 NPT Conduit connection port: M20 x 1.5 With blue cable gland
-----	---

Accessories Note 1)

Symbol	Accessories	Applicable model	
		IP8000-X14	IP8100-X14
Nil	Without accessory	●	●
A	With ø0.7 output restrictor integrated pilot valve Note 2)	●	●
B	With ø1.0 output restrictor integrated pilot valve Note 2)	●	●
C	With fork lever type fitting M Note 3)	—	●
D	With fork lever type fitting S Note 4)	—	●
E	With lever unit for a 35 to 100 mm stroke Note 5)	●	—
F	With lever unit for a 50 to 140 mm stroke Note 5)	●	—
G	With compensation spring (A) Note 6)	●	●
H	With external scale plate	—	●

Note 1) If multiple accessories are required, they should be indicated in alphabetical order.
ex. IP8100-010-AG

Note 2) "A" is applied to approx 90 cm³-capacity actuator.
"B" is applied to approx 180 cm³-capacity actuator.

Note 3) Fork lever-type fitting MX (Connection thread: M6 x 1) for IP8100-0□0-□-X14.

Note 4) Fork lever-type fitting SX (Connection thread: M6 x 1) for IP8100-0□0-□-X14.

Note 5) Standard lever is not attached.

Note 6) It is to be used together with "A" or "B" when tending to overshoot by the use of "A" or "B". It is mounted to the body as a replacement of the standard compensation spring.

Note 7) Combination of "L" and "W" is not available.

All other specifications are the same as the standard products Series IP8□.
For details, refer to the **WEB catalog** or Series IP8□ (CAT.ES60-18).

ATEX Compliant Smart Positioner (Lever type/Rotary type)

Series 52-IP8001/8101



CE II 1 G Ex ia IIC T4/T5/T6 Ga
T4/T5: Ta = -20°C to 80°C T6: Ta = -20°C to 60°C

How to Order

ATEX Directive Intrinsically
Safe Explosion Proof

ATEX directive compliance

52	ATEX directive category 1 Intrinsically safe explosion-proof
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52-IP8001-034- - -

Type

001	Smart lever type
101	Smart rotary type

Pressure gauge Note

Symbol	Pressure gauge	Applicable model	
		IP8001	IP8101
1	0.2 MPa	●	—
2	0.3 MPa	●	—
3	1.0 MPa	●	●

Specifications

4	Intrinsically safe explosion proof (ATEX) + output function + HART communication
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ATEX temperature

Symbol	ATEX temperature	Applicable model	
		IP8001	IP8101
Nil	T4	●	●
T6	T5/T6	●	●

Connection

Symbol	Air	Electric
Nil	Rc1/4	G1/2
M Note)	Rc1/4	M20 x 1.5
N	Rc1/4	1/2NPT
1	1/4NPT	G1/2
2 Note)	1/4NPT	M20 x 1.5
3	1/4NPT	1/2NPT
4	G1/4	G1/2
5 Note)	G1/4	M20 x 1.5
6	G1/4	1/2NPT

Note) When the symbol is M, 2, or 5 for 52- ATEX directive items, a blue cable gland is included with the electrical connection.

Accessories Note 1)

Symbol	Accessories	Applicable model	
		IP8001	IP8101
Nil	None	●	●
C	With fork lever type fitting M	—	●
D	With fork lever type fitting S	—	●
E	For stroke 35 to 100 mm with lever unit Note 2)	●	—
F	For stroke 50 to 140 mm with lever unit Note 2)	●	—
H	With external scale plate	—	●
W	Body with LCD window	●	●

Note 1) If two or more accessories are required, the part numbers should be given in alphabetical order.

ex. 52-IP8101-034-CH

Note 2) Standard lever is not attached.

All other specifications are the same as the standard products Series IP8□.
For details, refer to the **WEB catalog** or Series IP8□ (CAT.ES60-18).

ATEX Compliant

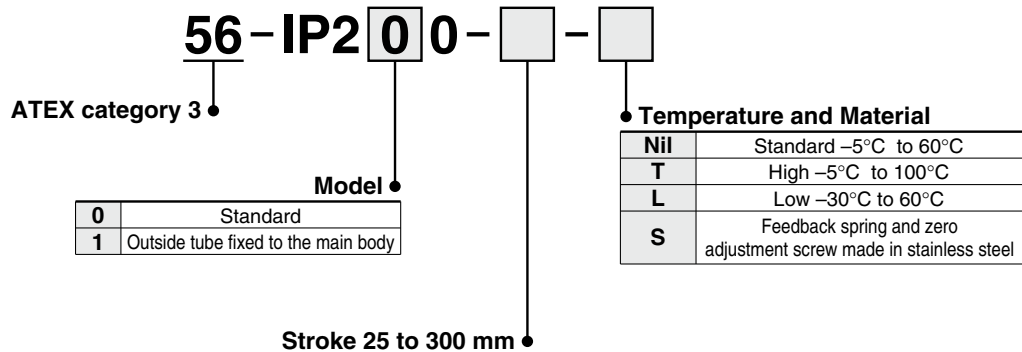
Cylinder Positioner

Series 56-IP200/210



CE  II 3GD T5...T6

How to Order



Specifications

Classification	Ambient temperature range		
	Low temp. model 56-IP2□0-□-L	Standard model 56-IP2□0-□	High temp. model 56-IP2□0-□-T
II 3GD 100°C (T5)	—	—	-5°C to 100°C
II 3GD 60°C (T6)	-30°C to 60°C	-5°C to 60°C	—

Model	56-IP200/210
Supply pressure	0.3 to 0.7 MPa
Signal pressure	0.02 to 0.1 MPa
Port size	Rc 1/4 (standard)
Pressure gauge port type	Rc 1/8
Linearity	Less than ± 2% F.S.
Hysteresis	Less than 1% F.S.
Repeatability	Less than 1% F.S.
Sensitivity	Less than 0.5% F.S.
Air consumption	18 L/min (ANR) or less (SUP=0.5 MPa)
Flow rate	200 L/min (ANR) or more (SUP=0.5 MPa)
Applicable cylinder	50 to 300 bore sizes/25 to 300 mm stroke
Operating temperature	-5°C to 60°C (Standard model) -30°C to 60°C (Low temp. model) -5°C to 100°C (High temp. model)

Note) Standard air temperature: 20°C, Absolute pressure: 101.3 kPa.
Relative humidity: 65%

All other specifications are the same as the standard products Series IP200.
For details, refer to **the WEB catalog** or Series IP200 (CAT.ES60).