52-SY-TFP19-B



Instruction Manual Series 52-SY5000/7000/9000 Solenoid operated 5 port Valve



## Marking description

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

Group II Category 2 Gas group II C Suitable for Gas environment Type of Protection ia "intrinsic safety" X' See DEKRA Certificate DEKRA 11ATEX0273 X

# 1 Safety Instructions

This manual contains essential information for the protection of users and others from possible injury and/or equipment damage.

- Read this manual before using the product, to ensure correct handling, and read the manuals of related apparatus before use.
- Keep this manual in a safe place for future reference.
- These instructions indicate the level of potential hazard by label of "Caution", "Warning" or "Danger", followed by important safety information which must be carefully followed.
- To ensure safety of personnel and equipment the safety instructions in this manual and the product catalogue must be observed, along with other relevant safety practices.

A	Caution	Indicates a hazard with a low level of risk, which if not avoided, could result in minor or moderate injury.
A	Warning	Indicates a hazard with a medium level of risk, which if not avoided, could result in death or serious injury.
A	Danger	Indicates a hazard with a high level of risk, which if not avoided, will result in death or serious injury.

This product is Class A equipment that is intended for use in an industrial environment

There may be potential difficulties in ensuring electromagnetic compatibility in other environments due to conducted as well as radiated disturbances.

#### 1 Weiterleye

- The compatibility of pneumatic equipment is the responsibility of the person who designs the pneumatic system or decides its specifications. Since the products specified here can be used in various operating conditions, their compatibility with the specific pneumatic system must be based on specifications or after analysis and/or tests to meet specific requirements
- Only trained personnel should operate pneumatically operated machinery and equipment.

Compressed air can be dangerous if an operator is unfamiliar with it. Assembly, handling or repair of pneumatic systems should be performed by trained and experienced personnel.

- Do not service machinery/equipment or attempt to remove components until safety is confirmed.
- 1) Inspection and maintenance of machinery/equipment should only be performed after confirmation of safe locked-out control positions.
- 2) When equipment is to be removed, confirm the safety process as mentioned above. Switch off air and electrical supplies and exhaust all residual compressed air in the system.
- 3) Before machinery/equipment is re-started, ensure all safety measures to prevent sudden movement of cylinders etc. (Supply air into the system gradually to create back pressure, i.e. incorporate a soft-start valve).

#### 1 Safety Instructions (continued)

- . Do not use this product outside of the specifications. Contact SMC if it is to be used in any of the following conditions:
- 1) Conditions and environments beyond the given specifications, or if the product is to be used outdoors.
- 2) Installations in conjunction with atomic energy, railway, air navigation. vehicles, medical equipment, food and beverage, recreation equipment, emergency stop circuits, press applications, or safety equipment.
- 3) An application which has the possibility of having negative effects on people, property, or animals, requiring special safety analysis.

#### Specific recommendations:

- Not suitable for Zones 0/20, 21 and 22. Only suitable for Zones 1 and 2.
- This product has components made of aluminium alloy. When mounting this product, it must be installed such that, even in the event of rare incidents, ignition sources due to impact and friction sparks are excluded.
- Do not energise both solenoids at the same time, as this can cause higher surface temperatures than under normal operating conditions
- The valves within the scope of this document must not be used with
- · Take care to avoid ignition sources due to electrostatic charge, and use only a damp cloth to clean the product.

. Ensure that the air supply system is filtered to 5 microns.

#### · Conformity to standards:

This product conforms to the following ATEX standards:

Flooring American for Explosive Con	EN 60079-0:
Electrical Apparatus for Explosive Gas	2012+A11:2013
Atmospheres	EN 60079-11: 2012
	1

EO 0\/E000 / 7000 / 0000

# 2 Specifications

#### 2.1 Valve Specification

1	Model	52-SY5000 / 7000 / 9000			
Valve construction	n	Pilot operated spool valve			
Fluid		Air and inert gas			
Onoratina	Single	0.15 to 0.7 MPa			
Operating pressure range	Double	0.1 to 0.7 MPa			
pressure range	3 position	0.2 to 0.7 MPa			
Ambient and fluid	temperature	-10 to 50°C (T4, T5)			
(No freezing)		-10 to 45°C (T6)			
Maximum	2 position				
operating	3 position	· 1 Hz			
frequency	o position	<u> </u>			
Lubrication		Not required			
Mounting position		Free			
Impact/Vibration	resistance (1)	150/30 m/s <sup>2</sup>			
	Plug connector (L)	IP30			
Enclosure	Plug connector (LL)	IP40			
Linciosure	Terminal (TT)	IP65			
	Grommet (G) (2)	IP65			
Rated voltage (H	azardous area)	12 VDC			
Allowable voltage	e fluctuation	±10% of rated voltage			
Type of coil insul	ation	Class B			
Power consumpt	ion	0.52 W			
ATEX classificati	on	II 2G Ex ia II C T4T6 Gb			
Certificate of con	formity	DEKRA 11ATEX0273X			

Note 1) Impact resistance: There should be no malfunction of the valve after testing along the valve axis and at right angles to the valve and armature. Carry out each test with the valve energised and de-energised (value at initial stage).

Vibration resistance: There should be no malfunction of the valve after testing using a 8.3 to 2000Hz sweep along the valve axis and at right angles to the valve and armature. Carry out each test with the valve energised and de-energised (value at

Note 2) Grommet type (G) is available on request.

#### 2 Specifications (continued)

#### . Batch codes and Construction month

The product control number is shown by two characters and two figures. The character shows Year and Month of manufacturing.

Year		2010	2011	2012	 2021	2022	2023	
Month		0	Р	Q	 Z	Α	В	
Jan	0	00	Po	Qo	 Zo	Ao	Во	
Feb	Р	οP	PP	QP	 ZP	AP	BP	
Mar	Q	οQ	PQ	QQ	 ZQ	AQ	BQ	
Apr	R	oR	PR	QR	 ZR	AR	BR	
May	S	oS	PS	QS	 ZS	AS	BS	
Jun	_	οΤ	PT	QT	 ZT	AT	BT	
Jul	С	υo	PU	QU	 ΖÜ	AU	BU	
Aug	<	οV	PV	QV	 ZV	AV	BV	
Sep	W	oW	PW	QW	 ZW	AW	BW	
Oct	Х	οX	PX	QX	 ZX	AX	BX	
Nov	у	oy	Ру	Qy	 Zy	Ay	Ву	
Dec	Z	οZ	PZ	QZ	 ZZ	AZ	BZ	
The figur	roc	chowe S	Serial nu	ımher				

The figures shows Serial number.

In the month of processing of nameplate Lot No and work order, the order in which work order has been processed is stamped to seal place.

#### 2.2 Port Sizes

# 2.2.1 Sub-plate

#### Side-Ported

Valve series 52-SY5000, 52-SY7000 and 52-SY9000 can be mounted on a sub-plate.

Madal	Port Size								
Model	P, EA, EB	A, B	PE, X						
52-SY5000	Rc, G, NPT, NPTF 1/4	Rc, G, NPT, NPTF 1/4	M5 x 0.8						
52-SY7000	Rc, G, NPT, NPTF 3/8, 1/4	Rc, G, NPT, NPTF 3/8, 1/4	M5 x 0.8						
52-SY9000	Rc, G, NPT, NPTF 3/8, 1/2	Rc, G, NPT, NPTF 3/8, 1/2	1/8"						

Table 1

#### 2.2.2 Manifold

Valve series 52-SY5000 and 52-SY7000 can be mounted on a manifold

Type 20

Model	Port Size					
Model	P, EA, EB	A, B				
SS5Y5-20	Rc, G, NPT, NPTF 1/4	Rc, G, NPT, NPTF 1/8, C4, C6, C8				
SS5Y7-20	Rc, G, NPT, NPTF 1/4 Rc, G, NPT, NPTF 1/4, C8, C10					

# Type 41 and 42

Madal	Port Size							
Model	P, EA, EB	A, B	PE, X					
SS5Y5-41	Rc, G, NPT, NPTF 1/4	Rc, G, NPT, NPTF 1/8, C6, C8	-					
SS5Y5-42	Rc, G, NPT, NPTF 1/4	Rc, G, NPT, NPTF 1/4, C6, C8	M5 x 0.8					
SS5Y7-42	Rc, G, NPT, NPTF 1/4	Rc, G, NPT, NPTF 1/4, C10	M5 x 0.8					

# Table 3

# 2.3 Circuit Symbolsmn

2 position single solenoid	2 position do solenoid		3 position closed centre
(A) (B)	(A) (B)		(A) (B)
			513
5 1 3 (EA) (P) (E8)	5 1 (EA)(P)(I	3 ≣B)	(EA)(P)(EB)
3 position exhau	ust centre	3	position pressure centre
(A) (B) 4 2 5 1 3 (EA)(P)(EB		[Z	(A) (B) 4 2 T T T T T T T T T T T T T T T T T T T

Figure 1

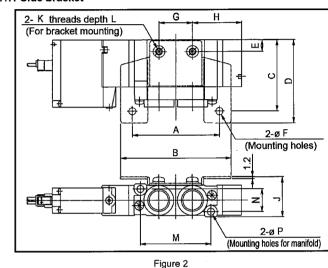
#### 3 Installation

#### 3.1 Installation

# • Do not install the product unless the safety instructions have been read and understood.

- Any mounting position is possible.
- The explosive atmosphere should not be allowed to enter the pneumatic circuit, even in case of expected malfunction.
- If air leakage increases or equipment does not operate properly, stop operation. After mounting is completed, confirm that is has been done correctly by performing a suitable function test.

#### 3.1.1 Side bracket



Model	T	Bracket (mm)								
	Α	В	С	D	E	F	G			
52-SY5000	37	45	36.7	40	16.7	3.2	22.6			
52-SY7000	52	66	42.5	49.5	7	4.2	20			
		Bracket (mm)								
Model	Н	J	К	L	М	N	Р			
52-SY5000	21	20	М3	3.5	36	11.6	3.2			
52-SY7000	29.4	15	M4	6.5	42	13.6	4.2			

Table 4

#### 3.1.2 Foot bracket (Single solenoid only)

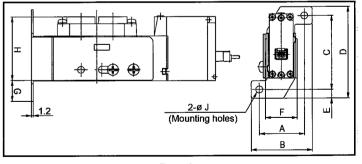


Figure 3

Model	Bracket (mm)								
	Α	В	в с		D		E		
52-SY5000	22	29	3	8	47		4.5		
52-SY7000	28	38	38 46		6 57		5.5		
	Bracket (mm)								
Model	F	(	G		Н		J		
52-SY5000	16.6	1	11		32		3.2		
52-SY7000	19.8	1:	3	39.5			4.2		

Table 5

# 3 Installation (continued)

# 3.1.3 Without bracket (52-SY9000 only)

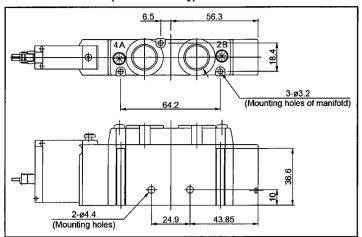


Figure 4

Note: No bracket available for 52-SY9000

# 3.1.4 Base mounting

# 52-SY5000

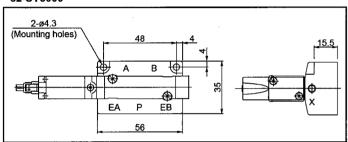


Figure 5

# 52-SY7000/9000

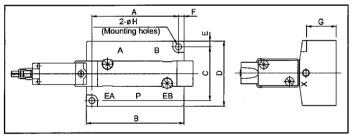


Figure 6

14-1-1	Base Mounting holes (mm)									
Model	Α	В	С	D	E	F	G	Н		
52-SY7000	61	69	38	46	4	4.	21	4.3		
52-SY9000	86.5	96.5	47	57	5	5	27	5.4		

Table 6

# 3 Installation (continued)

# 3.1.5 Manifold mounting

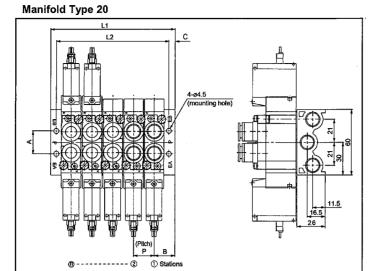


Figure 7

# 3 Installation (continued)

# Manifold Type 41

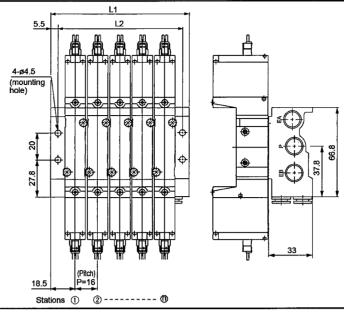


Figure 8

# 3 Installation (continued)

# Manifold Type 42

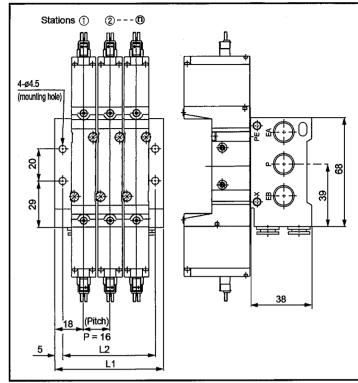


Figure 9

Model		Manifold Mounting holes (mm)							
Stations	n	2	3	4	5	6	7	8	
SS5Y5-20	L1	60	76	92	108	124	140	156	
	L2	40	56	72	88	104	120	136	
SS5Y7-20	L1	55	74	93	112	131	150	169	
	L2	46	65	84	103	122	141	160	
Model	<u> </u>		Man	ifold Mou	nting hole	es (mm)			
Stations	n	9	10	11	12	13	14	15	
SS5Y5-20	L1	172	188	204	220	236	252	268	
	L2	152	168	184	200	216	232	248	
SS5Y7-20	L1	188	207	226	246	264	283	302	
	L2	179	198	217	236	255	274	293	
Model		Man	ifold Mou	nting hole	es (mm)				
Stations	n	16	17	18	19	20			
SS5Y5-20	L1	284	300	316	332	348			
	L2	264	280	296	312	328			
SS5Y7-20	L1	321	340	359	378	397			
				1	1	1			

L2 312 331 350 369 388 Table 7

· Madal		(mm)					
Model	Α	В	С	Р			
SS5Y5-20	20	22	10	16			
SS5Y7-20	21	18	4.5	19			

Table 8

Model		Manifold Mounting holes (mm)						
Stations	n	2	3	4	5	6	7	8
SS5Y5-41	L1	52.5	68.5	84.5	100.5	116.5	132.5	148.5
	L2	42	58	74	90	106	122	138
Model		Manifold Mounting holes (mm)						
Stations	n	9	10	11	12	13	14	15
SS5Y5-41	L1	164.5	180.5	196.5	212.5	228.5	244.5	260.5
	L2	154	170	186	202	218	234	250
Model		Man	ifold Mou	nting hole	es (mm)			
Stations	n	16	17	18	19	20		
SS5Y5-41	L1	276.5	292.5	308.5	324.5	340.5	]	
	L2	266	282	298	314	330	1	

Table 9

Model		Manifold Mounting holes (mm)						
Stations	n	2	3	4	5	6	7	8
SS5Y5-42	L1	52	68	84	100	116	132	148
	L2	42	58	74	90	106	122	138
Model		Manifold Mounting holes (mm)						
Stations	n	9	10	11	12	13	14	15
SS5Y5-42	L1	164	180	196	212	228	244	260
	L2	154	170	186	202	218	234	250
Model		Manifold Mounting holes (mm)						
Stations	n	16	17	18	19	20		
SS5Y5-42	L1	276	292	308	324	340		
	L2	266	282	298	314	330		

Table 10

# 3 Installation (continued)

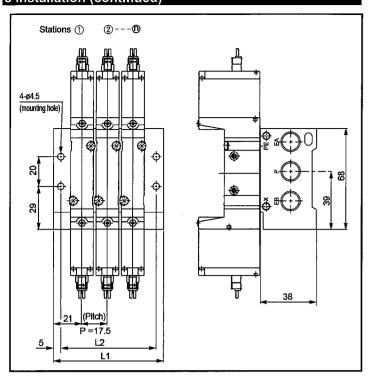


Figure 10

# 3 Installation (continued)

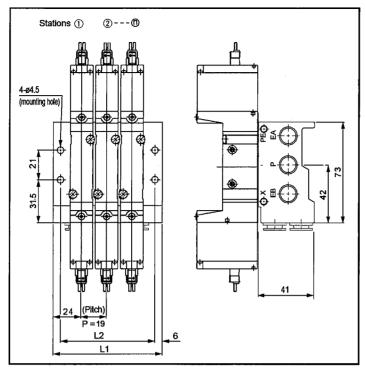


Figure 11

Model		Manifold Mounting holes (mm)						
Stations	n	2	3	4	5	6	7	8
SS5Y5-42-# -	L1	59.5	77	94.5	112	129.5	147	164.5
02	L2	49.5	67	84.5	102	119.5	137	154.5
Model		Manifold Mounting holes (mm)						
Stations	n	9.	10	11	12	13	14	15
SS5Y5-42-# -	L1	182	199.5	217	234.5	252	269.5	287
02	L2	172	189.5	207	224.5	242	259.5	277
Model		Manifold Mounting holes (mm)						
Stations	n	16	17	18	19	20		
SS5Y5-42-# -	L1	304.5	322	339.5	357	374.5		
02	L2	294.5	312	329.5	347	364.5		

Table 11

Model		Manifold Mounting holes (mm)						
Stations	n	2	3	4	5	6	7	8
SS5Y7-42	L1	61	80	99	118	137	156	175
	L2	49	68	87	106	125	144	163
Model		Manifold Mounting holes (mm)						
Stations	n	9	10	11	12	13	14	15
SS5Y7-42	L1	194	213	232	251	270	289	308
	L2	182	201	220	239	258	277	296
Model		Man	ifold Mou	nting hole	s (mm)			
Stations	n	16	17	18	19	20		
SS5Y7-42	L1	327	346	365	384	403		
	L2	315	334	353	372	391		

Table 12

## 3.2 Environment

# Natania€i

- Do not use in an environment where corrosive gases, chemicals, salt water or steam are present.
- Do not use in an explosive atmosphere, except Zones 1 and 2.
- Do not expose to direct sunlight. Use a suitable protective cover.
- Do not install in a location subject to vibration or impact. Check the product specifications.
- Do not mount in a location exposed to radiant heat.

# 3.3 Piping

# 1\ Weiming

- Before piping make sure to clean up chips, cutting oil, dust etc.
- When installing piping or fittings, ensure sealant material does not enter inside the port. When using seal tape, leave 1.5 to 2 threads exposed on the end of the pipe/fitting.

# 3 Installation (continued)

- Use antistatic tubing if required by the application.
- Tighten fittings to the specified tightening torque.

Thread	Tightening Torque N•m
M5 x 0.8	By hand + 1/6 turn with the wrench (1/4 turn for miniature fittings)
Rc 1/8	7 to 9
Rc 1/4	12 to 14
Rc 3/8	22 to 24
Rc 1/2	28 to 30
Rc 2	48 to 50

Table 13

#### 1 Gaution

# One-touch fittings:

Tube attachment

- Take a tube having no flaws on its periphery and cut it off at a right angle. When cutting the tube, use tube cutters TK-1, 2 or 3. Do not use pincers, nippers or scissors etc. If cutting is done with tools other than tube cutters, the tube may be cut diagonally or become flattened etc., making a secure installation impossible, and causing problems such as the tube pulling out after installation or air leakage. Allow some extra length in the tube.
- Grasp the tube and push it in slowly, inserting it securely all the way into the fitting.
- After inserting the tube, pull on it lightly to confirm that it will not come
  out. If it is not installed securely all the way into the fitting this can cause
  problems such as air leakage or the tube pulling out.

#### Tube detachment

 Push in the release bushing sufficiently and push the collar at the same time.

- Pull out the tube while holding down the release bushing so that it does not come out. If the release bushing is not pressed down sufficiently there will be increased bite on the tube and it will become more difficult to pull out.
- When the removed tube is to be used again, cut off the portion what has been chewed before re-using it. If the chewed portion of the tube is used as is, this can cause problems such as air leakage or difficulty in removing the tube from the fitting.

#### Precautions on other tube brands

 When using other than SMC brand tubes, confirm that the following specifications are satisfied with respect to the outside diameter tolerance of the tube.

Nylon tube ±0.1mmSoft nylon tube ±0.1mm

- Polyurethane tube +0.15mm / 0.2mm
- Do not use tubes that do not meet these outside diameter tolerances. It
  may not be possible to connect them, or they may cause other problems,
  such as air leakage or the tube pulling out after connection.
- The recommended tube for the clean fitting is polyolefin tube.
- Please note; Other tubes can satisfy the performance in terms of leakage, tensile strength, etc., but impair the cleanliness.

# 3 Installation (continued)

#### 3.3.1 Valve

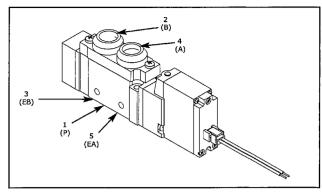


Figure 12

Madal	Port Size
Model	P, EA, EB , A, B
52-SY5000	Rc, G, NPT, NPTF 1/8, C4, C6, C8, N3, N7, N9
52-SY7000	Rc, G, NPT, NPTF 1/4, C8, C10, N9, N11
52-SY9000	Rc. G. NPT. NPTF 1/4, 3/8, C8, C10, C12, N9, N11

Table 14

# 3.3.2 Base mounted

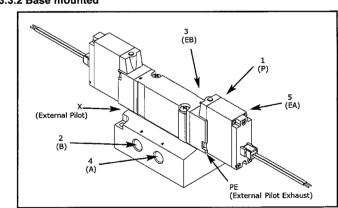


Figure 13

Model	Port Size					
Model	P, EA, EB	A, B	PE, X			
52-SY5000	Rc, G, NPT, NPTF 1/4	Rc, G, NPT, NPTF 1/4	M5 x 0.8			
52-SY7000	Rc, G, NPT, NPTF 3/8,	Rc, G, NPT, NPTF 3/8,	M5 x 0.8			
	1/4	1/4				
52-SY9000	Rc, G, NPT, NPTF 3/8,	Rc, G, NPT, NPTF 3/8,	1/8"			
	1/2	1/2				

Table 15

# 3 Installation (continued)

#### 3.3.3 Manifold - Type 20

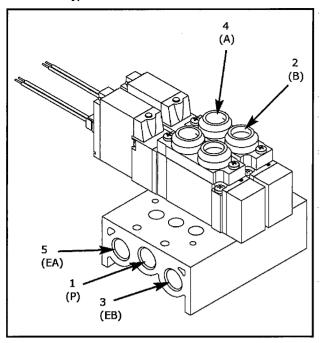


Figure 14

Model	Port Size				
Model	P, EA, EB	A, B			
SS5Y5-20	Rc, G, NPT, NPTF 1/4	Rc, G, NPT, NPTF 1/8, C4, C6, C8			
SS5Y7-20	Rc, G, NPT, NPTF 1/4	Rc, G, NPT, NPTF 1/4, C8, C10			

Table 16

# 3.3.4 Manifold - Type 41 and 42

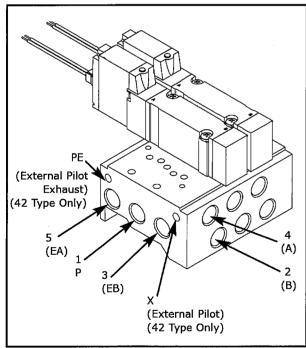


Figure 15

Model		Port Size	
iviodei	P, EA, EB	A, B	PE, X
SS5Y5-41	Rc, G, NPT, NPTF 1/4	Rc, G, NPT, NPTF 1/8, C6, C8	-
SS5Y5-42	Rc, G, NPT, NPTF 1/4	Rc, G, NPT, NPTF 1/4, C6, C8	M5 x 0.8
SS5Y7-42	Rc, G, NPT, NPTF 1/4	Rc, G, NPT, NPTF 1/4, C10	M5 x 0.8

Table 17

#### 3 Installation (continued)

#### 3.4 Electrical Connection

#### /!\ Candon

# • Ensure power is off before connecting.

# 3.4.1 Plug connector types (L and LL)

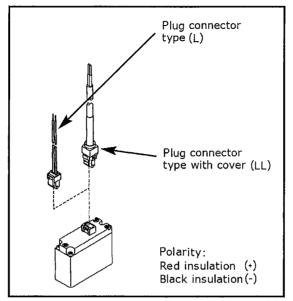


Figure 16

#### 3.4.2 Terminal type (TT)

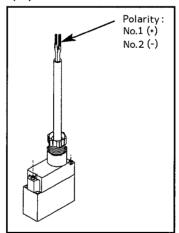


Figure 17

# 3.4.3 Grommet type (G) – Available on request

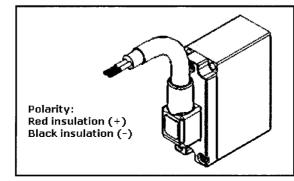


Figure 18

# 3 Installation (continued)

#### 1 Warning

- This product must be connected in accordance with the +/- polarity indication
- This product must be connected to a certified intrinsically safe circuit (e.g. Zener barrier) for apparatus group IIC with the following maximum values:

J: = 28V

I<sub>i</sub> = 225mA (resistively limited)

 $P_i = 1W$ 

 $C_i = 0nF$ 

 $L_i = 0 \text{mH}$ 

Confirm the solenoid input voltage at the lead wires is 12VDC +/-10%. The resistance of the solenoid valve is  $R_{20}$  = 278Ohm.

. Do not bend or pull cables repeatedly.

#### 3.5 Electrical circuit

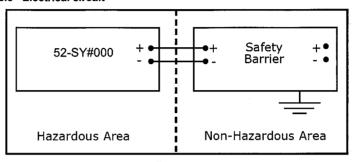


Figure 19

#### 3.6 Lubrication

- SMC products have been lubricated for life at manufacture, and do not require lubrication in service.
- If a lubricant is used in the system, use turbine oil Class 1 (no additive), ISO VG32. Once lubricant is used in the system, lubrication must be continued because the original lubricant applied during manufacturing will be washed away.

# 4 Settings

# 4.1 Manual Override

#### (Maraning)

 Ensure conditions are safe, since connected equipment will operate when manual override is performed.

# Non-locking push type (see Figure 20)

- Push on the manual override button using a small-bladed screwdriver or suitable tool until it stops ON.
- Hold this position for the duration of the check (ON position).
- Release the button and the override will re-set to OFF position.

# 4 Settings (continued)

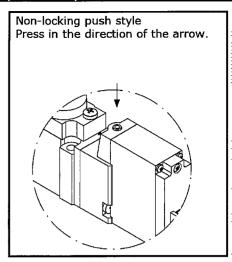


Figure 20

#### Push-locking slotted type (see Figure 21)

To lock

- Using a small-bladed screwdriver in the slot, push the manual override button down until it stops.
- Turn the override button 90° in the direction of the arrow until it stops (ON position).
- · Remove the screwdriver.

#### 1) Weightige

In this position the manual override is in the locked 'ON' position.

#### To unlock:

• Place a small-bladed screwdriver in the slot, push the manual override

#### button.

- Turn the override button 90° in the reverse direction of the arrow.
- Remove the screwdriver and the manual override will re-set to the OFF position.

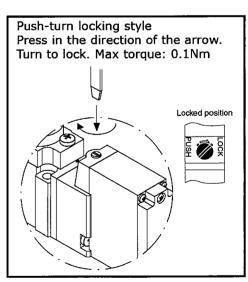


Figure 21

# Locking lever (slotted) type (see Figure 22)

To lock

- Push the manual override lever down until it stops.
- Manually turn the lever 90° in the direction of the arrow until it stops (ON position).
- A small-bladed screwdriver may be used in the slot, if needed.

# . . Warning

In this position the manual override is in the locked 'ON' position.

52-SY-TFP19-B

# 4 Settings (continued)

To unlock

- Push the manual override lever down.
- Manually turn the override lever 90° in the reverse direction of the arrow
- The manual override will re-set to the OFF position.

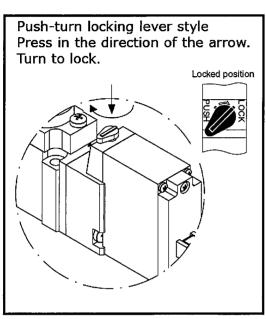


Figure 22

# 1 Gaudon

 When locking the manual override on the push-turn locking types, be sure to push down before turning, or damage may occur to the manual override, which may cause problems, such as leakage.

## 5 How to Order

Refer to the catalogue for this product.

# 6 Outline Dimensions (mm)

Refer to the catalogue for this product.

# 7 Maintenance

# 7.1 General Maintenance

#### ા∖ ઉદ્યાની હ

- Not following proper maintenance procedures could cause the product to malfunction and lead to equipment damage.
- If handled improperly, compressed air can be dangerous. Maintenance of pneumatic systems should be performed only by qualified personnel.
- Before performing maintenance, turn off the power supply and be sure to cut off the supply pressure. Confirm that the air is released to atmosphere.
- After installation and maintenance, apply operating pressure and power to the equipment and perform appropriate functional and leakage tests to make sure the equipment is installed correctly.
- . Do not make any modification to the product.
- Do not disassemble the product, unless required by installation or maintenance instructions.

1 Warring

#### 7.2 Valve removal

- Shut off the air supply and release the air pressure in the system.
- · Shut off the power supply.
- Remove valve mounting screws, M3 (52-SY5000) or M4 (52-SY7000) and carefully remove valve, ensuring the gasket is retained.

# 7 Maintenance (continued)

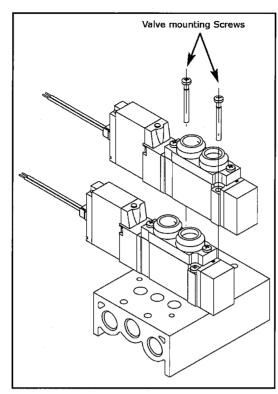


Figure 23

# 7.2.1 Reassembling valve (see Figure 23)

- Reassemble valve to manifold, ensuring gasket is present.
- Tighten screws to torque according to Table 18.

Thread	Tightening Torque N•m	
M3 x 0.5	0.7 to 0.8	
M4 x 0.7	1.3 to 1.4	

Table 18

# 8 Limitations of Use

# • Do not exceed any of the specifications laid out in section 2 of this

document or the specific product catalogue.

# 8.1 Confirm the specifications

 Give careful consideration to the operating conditions such as the application and environment, and use within the operating ranges specified in the catalogue.

# 8.2 Maintenance space

The installation should allow sufficient space for maintenance activities.

#### 8.3 Extended periods of energisation

- When a solenoid valve is continuously energised, for long periods of time, temperature increase from coil heat radiated can result in deteriorating performance and shortened service life of the solenoid valve, as well as adverse effects on peripheral equipment.
- Be especially careful when using three or more adjacent valves on manifold and keeping them continuously energised for extended periods, as this may result in dramatic increase in temperature.

### 8.4 Filters and strainers:

- Be careful regarding clogging of filters and strainers.
- Replace filter elements after one year of use, or earlier, if the pressure drop reaches 0.1MPa.
- Clean strainers when the pressure drop reaches 0.1Mpa.

# 8 Limitations of Use (continued)

#### 8.5 Drain flushing:

Remove drainage from air filters regularly. (Refer to the specifications).

#### 9 Contacts

Refer to Declaration of Conformity and www.smcworld.com for contacts.

# **SMC** Corporation

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