

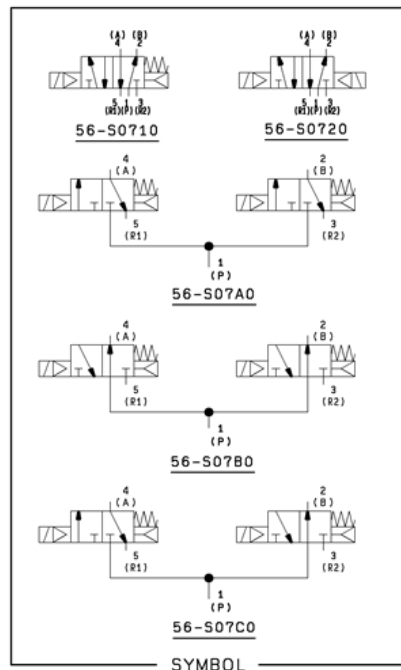
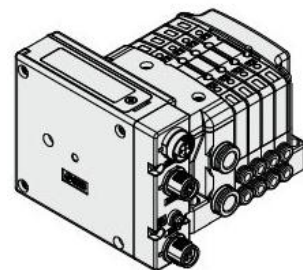


ORIGINAL INSTRUCTIONS



Refer to Declaration of Conformity for relevant Directives

Instruction Manual
Manifold 56-SS0750-##SDA#
Solenoid Valve 56-S07#0#-5-#



1 Safety Instructions (continued)

- 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.
- To ensure safety of personnel and equipment the safety instructions in this manual must be observed, along with other relevant safety practices.

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

1.1 Safety instructions



- **The compatibility of the product is the responsibility of the person who designs the equipment or decides its specifications.**
- Since the product specified here is used under various operating conditions, its compatibility with specific equipment must be decided by the person who designs the equipment or decides its specifications based on necessary analysis and test results. The expected performance and safety assurance of the equipment will be the responsibility of the person who has determined its compatibility with the product. This person should also continuously review all specifications of the product referring to its latest catalogue information, with a view to giving due consideration to any possibility of equipment failure when configuring the equipment.
- **Only personnel with appropriate training should operate machinery and equipment.**
 The product specified here may become unsafe if handled incorrectly.

The assembly, operation and maintenance of machines or equipment including our products must be performed by an operator who is appropriately trained and experienced.

- **Do not service or attempt to remove product and machinery/equipment until safety is confirmed.**
 - 1) The inspection and maintenance of machinery/equipment should only be performed after measures to prevent falling or runaway of the driven objects have been confirmed.
 - 2) When the product is to be removed, confirm that the safety measures as mentioned above are implemented and the power from any appropriate source is cut, and read and understand the specific product precautions of all relevant products carefully.
 - 3) Before machinery/equipment is restarted, take measures to prevent unexpected operation and malfunction.
- **Contact SMC beforehand and take special consideration of safety measures if the product is to be used in any of the following conditions.**
 - 1) Conditions and environments outside of the given specifications, or use outdoors or in a place exposed to direct sunlight.
 - 2) Installation on equipment in conjunction with atomic energy, railways, air navigation, space, shipping, vehicles, military, medical treatment, combustions and recreation, or equipment in contact with food and beverages, emergency stop circuits, clutch and brake circuits in press applications, safety equipment or other applications unsuitable for the standard specification described in the product catalogue.
 - 3) An application which could have negative effects on people, property, or animals requiring special safety analysis.
 - 4) Use in an interlock circuit, which requires the provision of double interlock for possible failure by using a mechanical protective function, and periodical checks to confirm proper operation.
- **Always ensure compliance with relevant safety laws and standards.**
- All electrical work must be carried out in a safe manner by a qualified person in compliance with applicable national regulations.

ATEX Marking Description
 II 3G Ex nA IIC T3 Gc X Ta -10 to 50°C

- Equipment Group II
 Category 3
 Gas (G) environment
 Ex European standards apply
 nA Non-sparking apparatus
 IIC For all types of gas
 T3 Temperature classification
 Gc Equipment Protection Level (EPL)
 X Special conditions apply, see section 1.2
 Ta Ambient temperature range

The intended use of this manifold is to control pneumatically operated equipment in ATEX Zone 2 (3G) areas. The valves in the manifold are controlled via the 56-EX260 Serial Transmission System. This manual should be read in conjunction with the manual for the 56-EX260 (56-EX260-TFT07).

1 Safety Instructions

These safety instructions are intended to prevent hazardous situations and/or equipment damage. These instructions indicate the level of potential hazard with the labels of "Caution," "Warning" or "Danger." They are all important notes for safety and must be followed in addition to International Standards (ISO/IEC)¹⁾, and other safety regulations.

¹⁾ ISO 4414: Pneumatic fluid power - - General rules relating to systems.
 ISO 4413: Hydraulic fluid power - - General rules relating to systems.
 IEC 60204-1: Safety of machinery - -Electrical equipment of machines. (Part 1: General requirements)
 ISO 10218-1: Manipulating industrial robots -Safety, etc.

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

1 Safety Instructions (continued)

1.2 Special conditions of use



- Protect from impacts using an ATEX compliant enclosure.
- Do not separate manifold components when energised.
- The manifold is suitable for use in ATEX Zone 2 applications only.
- Ensure that the hazardous gas does not enter the pneumatic circuit.
- The manifold must be installed in an enclosure of at least IP54.
- The manifold is suitable for areas of maximum pollution degree 2 only.
- To maintain the IP rating, do not separate manifold parts.
- To avoid static charge build up, use only a damp cloth to clean the manifold.
- Ensure that the product does not become electrostatically charged.
- Protect the unit from sources of heat which can generate surface temperatures higher than the temperature classification.
- Use only ATEX approved M12 connectors and use only shielded cable to provide grounding.
- Only 56-S07#0#-5-# valves to be used in this manifold.
- If energising 5 or more adjacent stations for an extended period the ON time must be less than the OFF time in any 24 hour period.



- **Ensure that the air supply system is filtered to 5 microns.**
- **The product is provided for use in manufacturing industries.**
 The product herein described is basically provided for peaceful use in manufacturing industries. If considering using the product in other industries, consult SMC beforehand and exchange specifications or a contract if necessary. If anything is unclear, contact your nearest sales branch.

1.3 Conformity to Standards

This product conforms to the following ATEX standards

| | |
|--|--|
| Electrical Apparatus for Explosive Gas Atmospheres | EN 60079-0:2012+A11:2013 EN 60079-15:2010 |
|--|--|

2 Specifications

2.1 General specifications

56-S07#0#-5-# Solenoid valve

| | | |
|-----------------------------|---|---------------------------------|
| Valve specification | Valve construction | Rubber seal |
| | Fluid | Air/Inert gas |
| | Maximum operating pressure | 0.7MPa [1.0MPa] |
| | Minimum operating pressure | 0.2MPa [0.3MPa] |
| | Ambient temperature °C | -10 to 50°C ^(Note 1) |
| | Maximum operating frequency | 5Hz |
| | Pilot valve exhaust method | Common exhaust |
| | Pilot valve manual override | Push type |
| | Lubrication | Not required |
| | Impact/Vibration resistance ^(Note 2) | 30/100 m/s ² |
| Electrical specification | Enclosure | See notes 3, 4 |
| | Coil rated voltage | 24 VDC |
| | Allowable voltage variation | ±10% of rated voltage |
| | Coil insulation type | Class B or equivalent |
| Power consumption (current) | DC | 0.35W [0.5W] |

Value in [] shown for K option

Note 1) Use dry air to prevent condensation when operating at low temperatures.

Note 2) **Impact resistance:** No malfunction occurred when it is tested with a drop tested in the axial direction and at right angles to the main valve and armature in both energised and de-energised states.

Vibration resistance: No malfunction occurred in a one-sweep test between 8.3 and 2000 Hz. Test was performed in both energised and de-energised states in the axial direction and at right angles to the main valve and armature.

2 Specifications (continued)

Note 3) The manifold must be installed in an enclosure of at least IP54, and only used in an area of maximum pollution degree 2.

Note 4) Protect from impacts using an ATEX compliant enclosure.

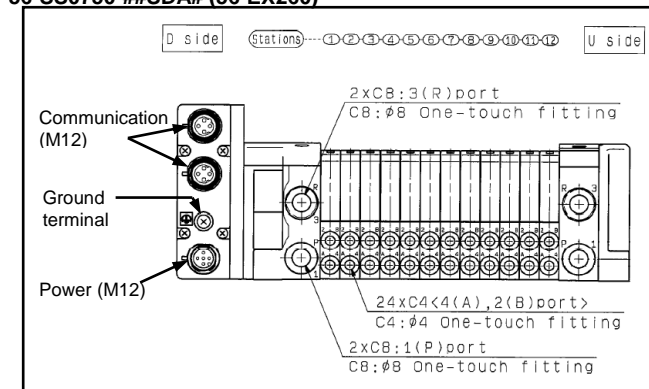
Note 5) For 56-EX260 specifications, see manual 56-EX260-TFT07.

2.2 Batch codes and construction month:

| | | | | | | | | |
|-------|------|------|------|-----|------|------|------|-----|
| Year | 2012 | 2013 | 2014 | ... | 2021 | 2022 | 2023 | ... |
| Month | Q | R | S | ... | Z | A | B | ... |
| Jan | O | Qo | Ro | So | ... | Zo | Ao | Bo |
| Feb | P | QP | RP | SP | ... | ZP | AP | BP |
| Mar | Q | QQ | RQ | SQ | ... | ZQ | AQ | BQ |
| Apr | R | QR | RR | SR | ... | ZR | AR | BR |
| May | S | QS | RS | SS | ... | ZS | AS | BS |
| Jun | T | QT | RT | ST | ... | ZT | AT | BT |
| Jul | U | QU | RU | SU | ... | ZU | AU | BU |
| Aug | V | QV | RV | SV | ... | ZV | AV | BV |
| Sep | W | QW | RW | SW | ... | ZW | AW | BW |
| Oct | X | QX | RX | SX | ... | ZX | AX | BX |
| Nov | Y | Qy | RQy | Sy | ... | Zy | Ay | By |
| Dec | Z | QZ | RZ | SZ | ... | ZZ | AZ | BZ |

2.3 Piping

56-SS0750-##SDA# (56-EX260)



3 Installation

3.1 Installation



- Do not install the product unless the safety instructions in section 1 have been read and understood.
- Protect from impacts using an ATEX compliant enclosure.
- To maintain the IP rating, do not separate manifold parts.
- This manual should be read in conjunction with the manual for the 56-EX260 (56-EX260-TFT07).

3.2 Environment



- Do not use in an environment where corrosive gases, chemicals, salt water or steam are present.
- 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.
- The manifold is suitable for use in ATEX Zone 2 applications only.
- Ensure that the hazardous gas does not enter the pneumatic circuit.
- The manifold must be installed in an enclosure of at least IP54.
- The manifold is suitable for areas of maximum pollution degree 2 only.
- Ensure that the product does not become electrostatically charged.

3.3 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.
- Contact SMC for OIL FREE specification.

4 Settings

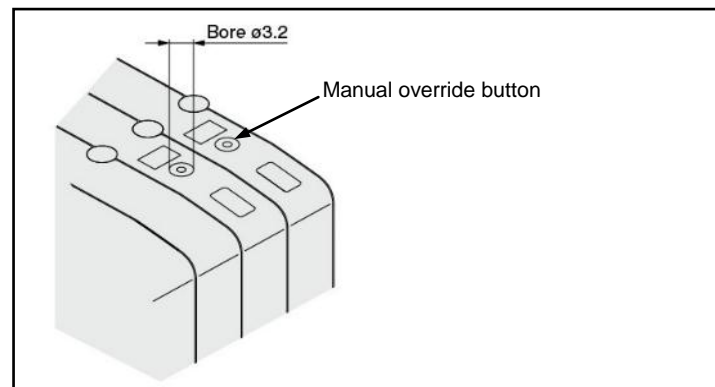
4.1 Manual override

Warning

The manual override is used for switching the main valve.

Push style (tool needed)

Push down on the manual override button with a small screwdriver until it stops.



4.2 56-EX260-###-X## Serial Transmission System

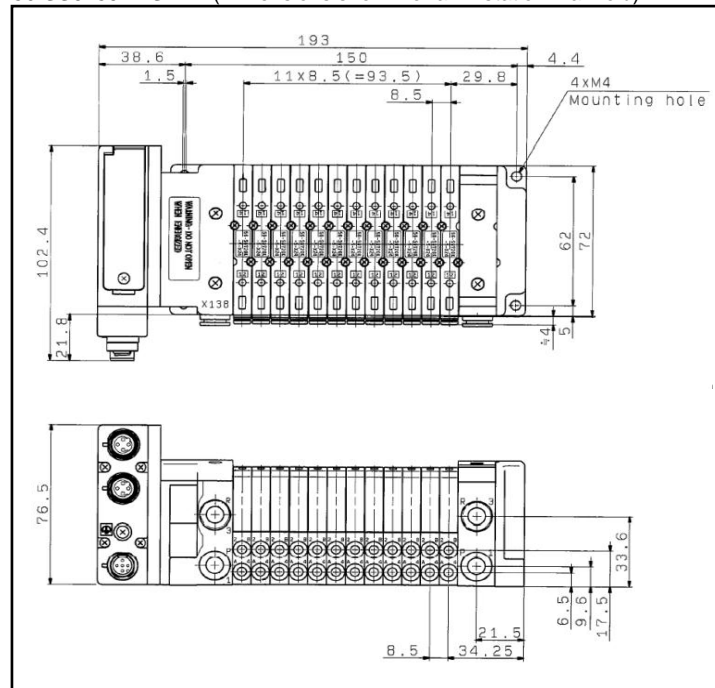
For 56-EX260 specifications, see manual 56-EX260-TFT07.

5 How to Order

Contact SMC for relevant assembly drawing.

6 Outline Dimensions (mm)

56-SS0750-##SDA# (Dimensions shown for a 12 station manifold)



7 Maintenance

7.1 General Maintenance

Caution

- 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.
- If any electrical connections are disturbed during maintenance, ensure they are reconnected correctly and safety checks are carried out as required to ensure continued compliance with applicable national regulations.
- Do not make any modification to the product.
- Do not disassemble the product, unless required by installation or maintenance instructions.

7.2 Safety

Warning

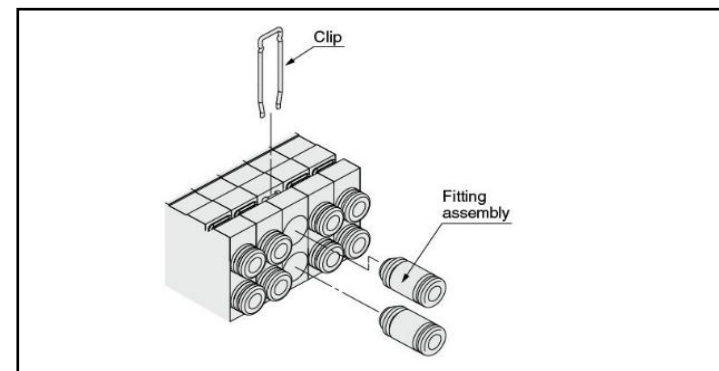
- Ensure that the Safety Instructions in section 1 of this document have been read and understood before carrying out maintenance procedures.
- Do not separate manifold components when energised.
- To avoid static charge build up, use only a damp cloth to clean the manifold.

7.3 Replacing the A/B port one-touch fittings

Warning

The A/B port fittings are cassette type so they can be easily replaced. The fittings are held in place by a clip inserted from the top of the manifold, so this clip should be removed with a flat bladed screwdriver before replacing the fittings.

To replace, after inserting the fitting assembly into position, replace the clip in its correct position.



| Tube diameter | One-touch fitting part number |
|--------------------|-------------------------------|
| Applicable tube ø4 | VVQ0000-50A-C4 |

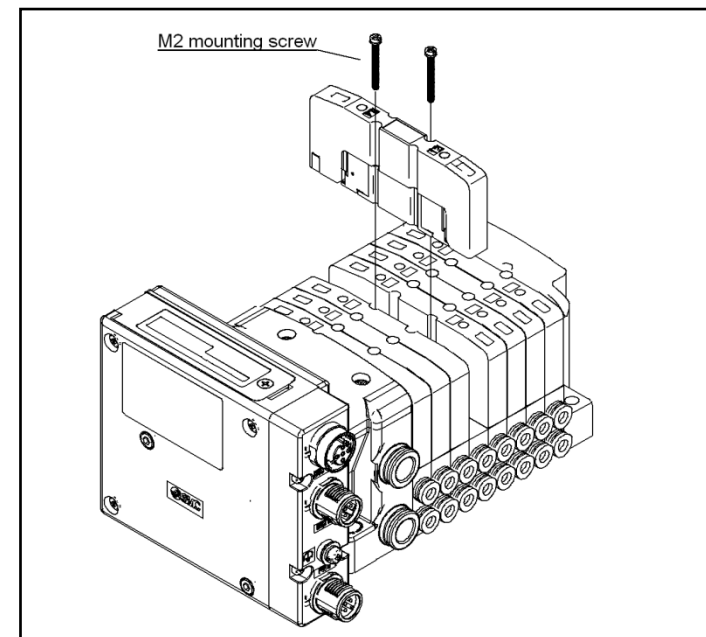
This part number is for one fitting assembly.
Please order in units of 10.

7 Maintenance (continued)

7.3 Mounting of valves

Warning

Valve mounting method



Tighten mounting screws to a torque of 0.17–0.23 N.m to clamp the gasket securely.

8 Limitations of Use

8.1 Limited warranty and Disclaimer/Compliance Requirements

The product used is subject to the following "Limited warranty and Disclaimer" and "Compliance Requirements". Read and accept them before using the product.

Limited warranty and Disclaimer

1) The warranty period of the product is 1 year in service or 1.5 years after the product is delivered, whichever is first⁽¹⁾. Also, the product may have specified durability, running distance or replacement parts. Please consult your nearest sales branch.

2) For any failure or damage reported within the warranty period which is clearly our responsibility, a replacement product or necessary parts will be provided.

This limited warranty applies only to our product independently, and not to any other damage incurred due to the failure of the product.

3) Prior to using SMC products, please read and understand the warranty terms and disclaimers noted in the specified catalogue for the particular products.

⁽¹⁾ Vacuum pads are excluded from this 1 year warranty.

A vacuum pad is a consumable part, so it is warranted for a year after it is delivered. Also, even within the warranty period, the wear of a product due to the use of the vacuum pad or failure due to the deterioration of rubber material are not covered by the limited warranty.

Compliance Requirements

1) The use of SMC products with production equipment for the manufacture of weapons of mass destruction (WMD) or any other weapon is strictly prohibited.

2) The exports of SMC products or technology from one country to another are governed by the relevant security laws and regulations of the countries involved in the transaction. Prior to the shipment of a SMC product to another country, assure that all local rules governing that export are known and followed.

8 Limitations of use (continued)

Caution

SMC products are not intended for use as instruments for legal metrology.

Measurement instruments that SMC manufactures or sells have not been qualified by type approval tests relevant to the metrology (measurement) laws of each country.

Therefore, SMC products cannot be used for business or certification ordained by the metrology (measurement) laws of each country.

9 Contacts

| | |
|------------|--|
| AUSTRIA | SMC Pneumatik GmbH, Girakstrasse 8, AT-2100 Korneuburg, Austria |
| BELGIUM | SMC Pneumatics N.V./S.A. Nijverheidsstraat 20, B-2160 Wommelgem, Belgium |
| BULGARIA | SMC Industrial Automation Bulgaria EOOD, Business Park Sofia, Building 8-6th floor, BG-1715 Sofia, Bulgaria |
| CROATIA | SMC IndustrijskaAutomatikad.o.o. ZagrebačkaAvenija 104,10 000 Zagreb |
| CZECH REP. | SMC Industrial Automation CZ s.r.o. Hudcova 78a, CZ-61200 Brno, Czech Republic |
| DENMARK | SMC Pneumatik A/S, Egeskovvej 1, DK-8700 Horsens, Denmark |
| ESTONIA | SMC Pneumatics Estonia Oü, Laki 12, EE-10621 Tallinn, Estonia |
| FINLAND | SMC Pneumatics Finland Oy, PL72, Tiistinniityntie 4, SF-02031 Espoo, Finland |
| FRANCE | SMC Pneumatique SA.1, Boulevard de Strasbourg, Parc Gustave Eiffel, Bussy Saint Georges, F-77607 Marne La Vallée Cedex 3, France |
| GERMANY | SMC Pneumatik GmbH, Boschring 13-15, 63329 Egelsbach, Germany |
| GREECE | SMC Italia Hellas Branch, Anagenniseos 7-9-P.C. 14342 N.Philadelphia, Athens, Greece |
| HUNGARY | SMC Hungary IpariAutomatizálásiKft. Torbágy u. 19, HU-2045 Törökbalint, Hungary |
| IRELAND | SMC Pneumatics (Ireland) Ltd. 2002 Citywest Business Campus, Naas Road, Saggart, Co. Dublin, Ireland |

| | |
|-------------|--|
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| LATVIA | SMC Pneumatics Latvia SIA, Dzelzavas str. 120g, Riga, LV-1021, Latvia |
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| RUSSIA | SMC Pneumatik LLC. Business centre, building 3, 15 Kondratjevskij prospect, St.Petersburg, Russia, 195197 |
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