

S6040A1003/S6065A1003/S6065A2001 AIR & LIQUID FLOW SWITCHES

DATA & MOUNTING INSTRUCTIONS



GENERAL

The air and liquid flow switches of the S6040 and S6065A series are designed for monitoring flow rates in pipes and ducts employed in HVAC applications.

The S6040A1003 Air Flow Switch monitors air flow and the flow of non-aggressive gases in the air ducts of air conditioning systems and air treatment systems.

The liquid flow switches of the S6065A series are suitable for monitoring flow in oil, cooling circuits, and lubrication systems.

FEATURES

- Cost-effective switches for HVAC applications.
- High-capacity, fully-encapsulated NC/NO micro-switch
- A single type suitable for pipes with a diameter of 1 to 8".

COMMON SPECIFICATIONS

| | |
|-----------------------|--|
| Switching capacity | 15 (8) A, 24...250 Vac |
| Lifetime | 50000 cycles at nominal load |
| Working temperature | -40 °C ... +85 °C |
| Electrical connection | Screw terminal, wire up to 1.5 mm ² cable Ø 6...9 mm |
| Protection class | I according to EN60730 |
| Protection standard | IP65 according to EN60529 |
| Housing material | ABS and corrosion-protected steel |

MODELS

| Specification | S6040A1003 | S6065A1003 | S6065A2001 |
|-------------------------------|--|-----------------------|-------------------|
| Flow medium | air | non-aggressive liquid | aggressive liquid |
| Mounting | vertically through a 20-mm hole in the duct; mount paddle inside | Rp 1" (ISO7/1) | Rp 1" (ISO7/1) |
| Maximum duct/pipe temperature | 85 °C | 120 °C | 120 °C |
| Pressure | 0.25 bar | 11 bar | 30 bar |
| Paddle material | V2A | V4A | V4A |
| Lever | yellow brass | yellow brass | V4A |
| Housing dimensions | 108 x 70 x 72 mm | 113 x 70 x 65 mm | 108 x 70 x 72 mm |
| Weight | 700 g | 850 g | 850 g |
| Approvals | -- | TÜV-approved | TÜV-approved |

MOUNTING

Mounting the S6040A1003

The S6040A1003 Air Flow Switch (with separate paddle) is mounted in the vertical position (i.e. with the switch box at the top). Necessary flow smoothing distance: min. five times the diameter of duct before and behind the switch!

The device must be mounted with the package-included seal plate through an approx. 20-mm hole in the duct. The device must be fixed with two package-included screws. The paddle must then be mounted with a screw on the shaft inside of the duct.

Mounting the S6065A1003 and S6065A2001

The S6065A1003 and S6065A2001 Liquid Flow Switches can be mounted in any desired position far from elbows, valves, and filters. The arrow on the housing must point downstream. In the case of vertical pipes, reset the range to balance the paddle weight. To prevent malfunction caused by impurities in the medium, do not mount the device with the housing pointing downwards.

SWITCH-POINT ADJUSTMENT

S6040A1003 Air Flow Switch

Min. switch point: approx. 2.5 m/s; reset point: 1 m/s.
Max. switch point: approx. 9.2 m/s; reset point: 8.0 m/s.

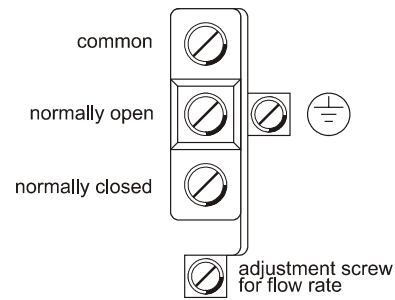
S6065A1003 and S6065A2001 Liquid Flow Switches

The flow switch is factory-set to the min. flow rate (= low flow speed). To adjust the device to a certain switch level, turn the adjustment screw clockwise. Table 1 lists the reset points and switch points at the minimum and maximum flow rates for various pipe diameters.

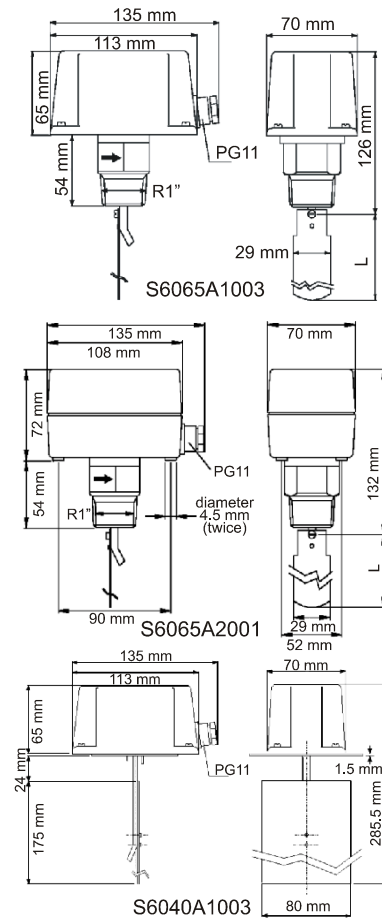
Table 1. Reset and switch points

| Pipes DN | Paddle | Reset and switch point (m ³ /h) | | | |
|----------|--------|--|------------|----------------|------------|
| | | min. flow rate | | max. flow rate | |
| | | reset pt. | switch pt. | reset pt. | switch pt. |
| 1" | short | 0.6 | 1.0 | 2.0 | 2.1 |
| 1-1/4" | short | 0.8 | 1.3 | 2.8 | 3.0 |
| 1-1/2" | short | 1.1 | 1.7 | 3.7 | 4.0 |
| 2" | short | 2.2 | 3.1 | 5.7 | 6.1 |
| 2-1/2" | short | 2.7 | 4.0 | 6.5 | 7.0 |
| 3" | short | 4.3 | 6.2 | 10.7 | 11.4 |
| 3-1/2" | short | 11.4 | 14.7 | 27.7 | 29.0 |
| 4" | long | 6.1 | 8.0 | 17.3 | 18.4 |
| 5" | short | 22.9 | 28.4 | 53.3 | 55.6 |
| 5" | long | 9.3 | 12.9 | 25.2 | 26.8 |
| 6" | short | 35.9 | 43.1 | 81.7 | 85.1 |
| 6" | long | 12.3 | 16.8 | 30.6 | 32.7 |
| 8" | short | 72.6 | 85.1 | 165.7 | 172.5 |
| 8" | long | 38.6 | 46.5 | 90.8 | 94.2 |

FIELD WIRING



DIMENSIONS



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