MOVEX CONTROL UNITS

CONTROLS-VEHICLE EXHAUST EXTRACTION

Movex's control units offers an efficient working environment, adapted to all types of applications. The right choice of control units is energy-saving and provides the lowest possible noise levels.

Control automation encompasses specially adapted and proven components, as well as recommendations for appropriate system selections.
In the installation examples on pages 2 through 5, there are suggestions for various solutions to help finding systems to comply with most needs.
Exhaust extraction products are presented in various system solutions in the examples.

For control of local extractors installations, see the Control Extractor Arms brochure.

For help in installation or to calculate energy savings, please contact Movex.

Movex also offers a range of local extractors, fans, accessories, and filters

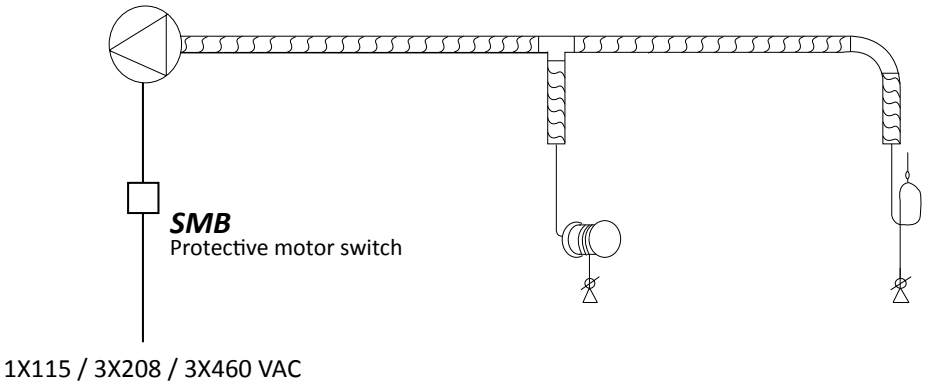
Start and stop of fan, with or without speed control

System 1:11

Manual start and stop of fan

The fan is started and stopped manually with protective motor switch SMB.

The protective motor switch has thermal magnetic release and a phase failure protection.

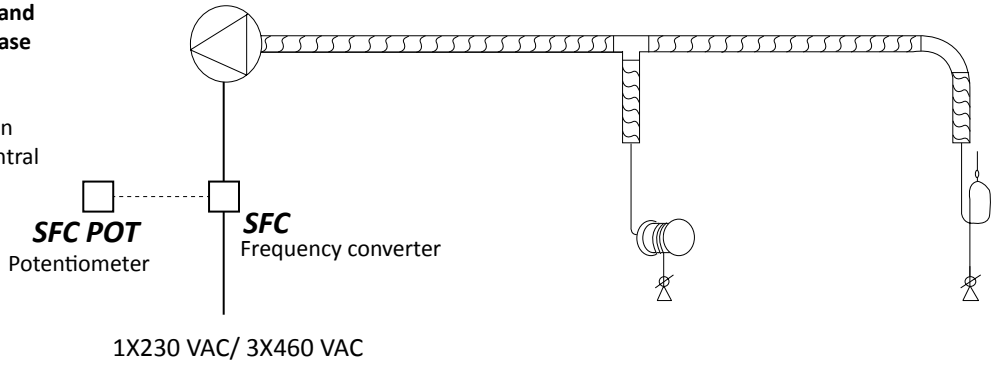


System 1:12

Manual speed control of fan started and stopped with an external signal 3-phase motor only.

The signal to start and stop fan with an external signal from for example a central monitoring system.

The SFC POT potentiometer manually regulates the fan speed control according to your requirements.

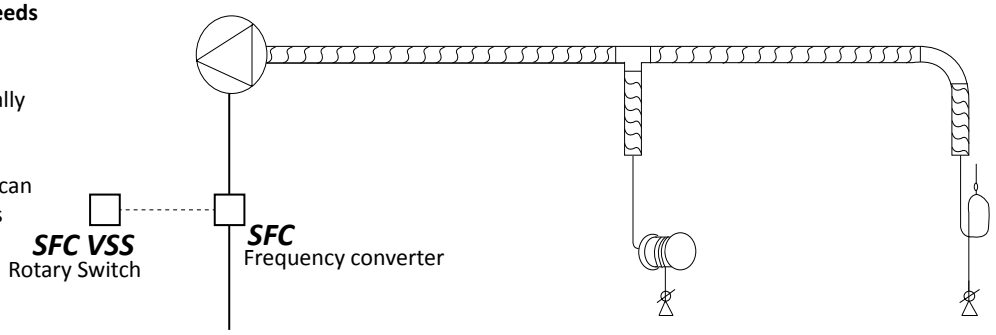


System 1:13

Manual start and stop of fan two speeds 3-phase motor only

The fan is started and stopped manually with the rotary switch SFC VSS.

With the rotary switch the fan speed can be switched between 2 preset speeds programmed on the frequency converters display.

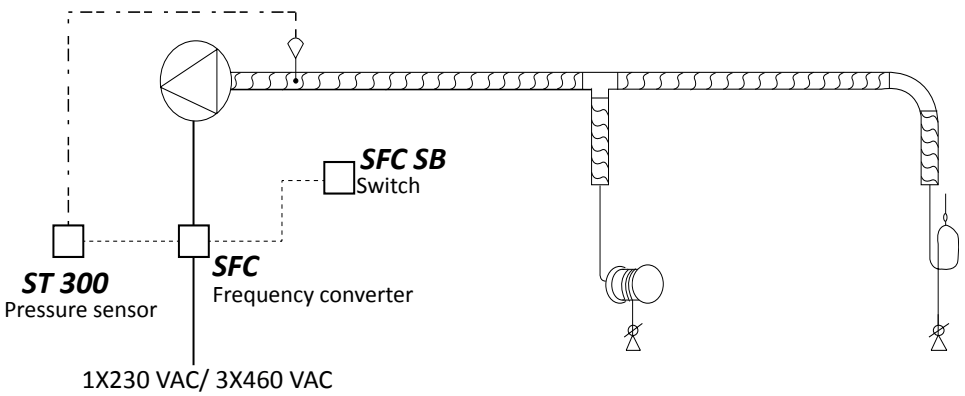


System 1:14

Manual start and stop of fan as well as demand control of fan speed 3-phase motor only.

The fan is started and stopped manually with the switch SFC SB.

The frequency converter maintains the negative pressure in the collecting duct using the pressure sensor.



1x230/ 3x460 VAC

Signal cable

Plastic tubing

Start and stop of fan with contactor.

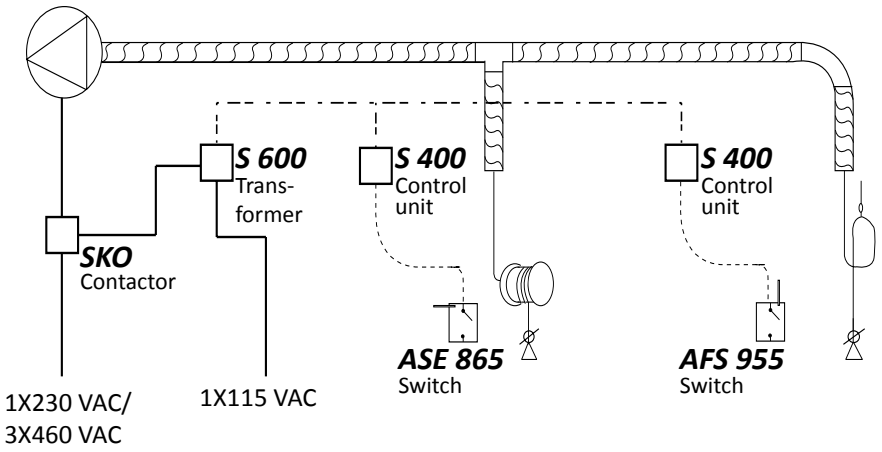
Automatic control, with time delay.

System 2:11

Automatic start and stop of fan.

Automatic start and stop with a switch placed on the hose reel or balancing block.

Control unit S 400 is equipped with an adjustable time delay of 0-15 minutes.



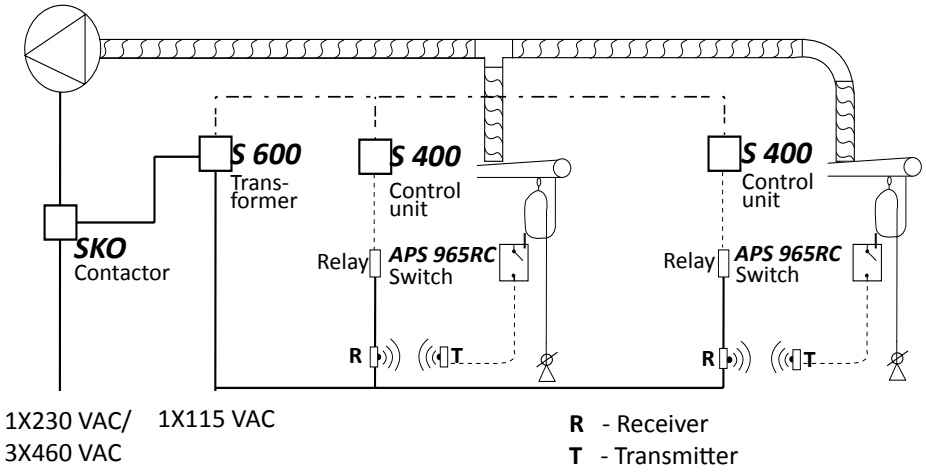
Automatic control, radio transmitted with a time delay.

System 2:12

Automatic start and stop of fan.

Automatic start and stop with a radio switch placed on the balancing block.

Control unit S400 is equipped with an adjustable time delay 0-15 minutes.



1x230/ 3x460 VAC

Signal cable

Plastic tubing

Individual damper control, start and stop of fan through a contactor.

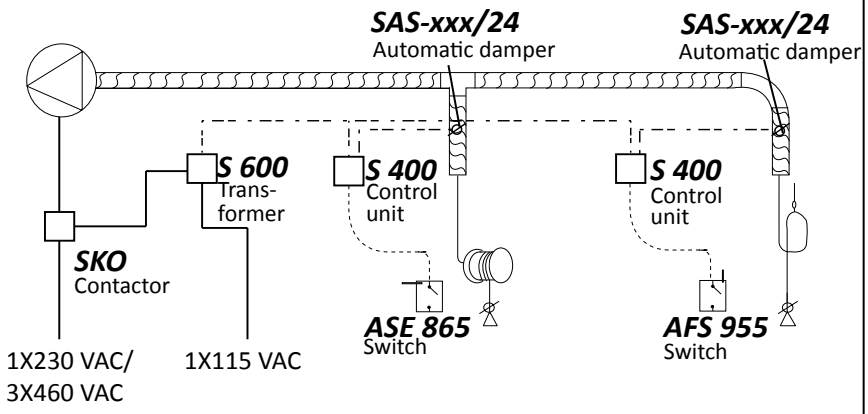
Automatic control of fan and damper, with time delay.

System 3:11

Automatic start and stop of fan.

Start and stop of fan as well as opening and closing of damper is automatic with a switch placed on the hose reel or balancing block.

Control unit S 400 is equipped with an adjustable time delay 0 - 15 minutes.



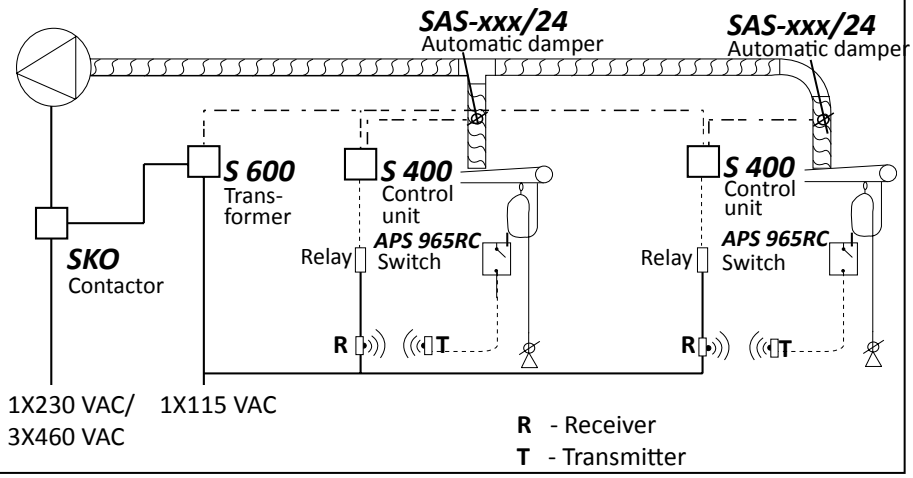
Automatic control of fan and damper, radio transmitter with time delay.

System 3:12

Automatic start and stop of fan.

Start and stop of fan as well as opening and closing of damper is automatic with a radio transmitted switch placed on the balancing block.

Control unit S 400 is equipped with an adustable time delay 0 - 15 minutes.



1x230/ 3x460 VAC

Signal cable

Plastic tubing

Individual damper control and control of the fan through a pressure sensor and frequency converter.

Automatic control of the frequency converter and damper, with time delay.

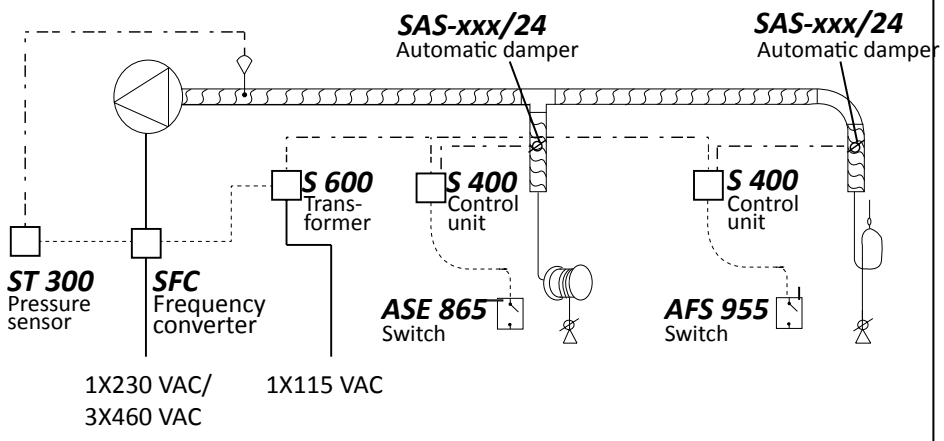
System 4:11

Manual control of damper and need-adapted control and start and stop of fan 3-phase motor only.

Start and stop of fan as well as opening and closing of dampers is automatic with a switch placed on the hose reel or balancing block.

The frequency converter maintains a constant negative pressure in the main duct via the pressure sensor.

Control unit S 400 is equipped with an adjustable time delay 0 - 15 minutes.

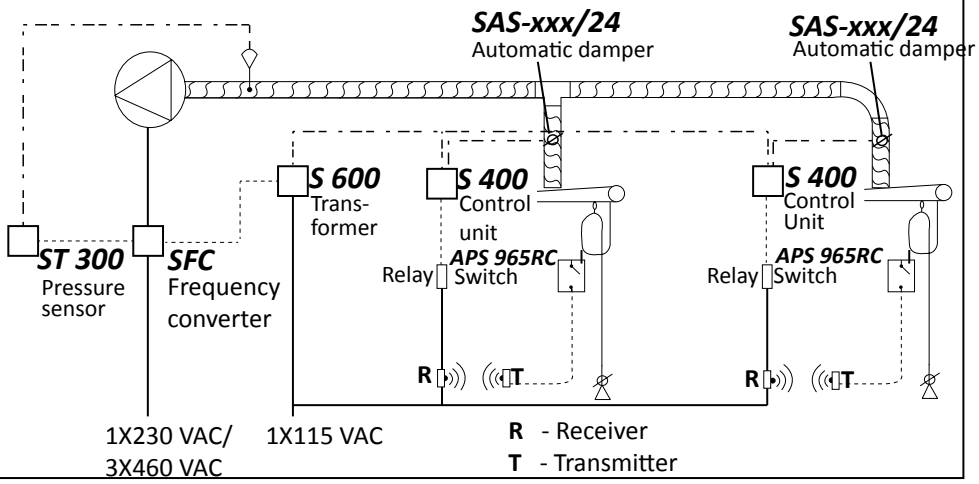


Automatic control of frequency converters and damper, radio transmitter with time delay

System 4:12

Automatic control of damper and need-adapted control and start and stop of fan 3-phase motor only.

Start and stop of fan as well as opening and closing of damper is automatic with a radio transmitted switch placed on the balancing block.
The frequency converter maintains a constant negative pressure in the main duct via the pressure sensor.
Control unit S 400 is equipped with an adjustable time delay 0 - 15 minutes.



1x208/ 3x460 VAC
Signal cable
Plastic tubing

SFC

FREQUENCY CONVERTER
Designed for process ventilation

The SFC frequency converter is designed for variable speed control of fans. This provides optimal operating effiency and the lowest possible noise level. Depending on the number of work stations in operation, the SFC (along with the ST 300 pressure sensor) varies the fan speed and thus evacuates the correct amount of air.
Alternatively, manual variable control can be used with the SFC POT potentiometer.
The enclosure class is IP 20 and includes a NEMA mounting kit.
SFC converters can be for 208V-230V, or 460V.
For alternative voltages, etc., please contact Movex.

MOVEX VFD number	Fan model	Hp	Voltage in	Voltage out	PhaseA	mps
SFC 076-3-230 SFC 076-3-460	FB 076-3 FB 076-3	0,75 0,75	208-230 460	208-230 460	3 3	2.2 - 2.45 1.1
SFC 106-3-230 SFC 106-3-460	FB 106-3 FB 106-3	1 1	208-230 460	208-230 460	3 3	3.7 - 4.1 1.85
SFC 206-3-230 SFC 206-3-460	FB 206-3 FB 206-3	2 2	208-230 460	208-230 460	3 3	5.6 - 6.2 2.8
SFC 406-3-230 SFC 406-3-460	FB 406-3 FB 406-3	4 4	208-230 460	208-230 460	3 3	10.6 - 11.7 5.3
SFC 706-3-230 SFC 706-3-460	FB 706-3 FB 706-3	7,5 7,5	208-230 460	208-230 460	3 3	17.6 - 19.4 8.8
SFC 1506-3-230 SFC 1506-3-460	FB 1506-3 FB 1506-3	15 15	208-230 460	208-230 460	3 3	35.2 - 38.9 17.6

SFC PS/VSS/SB

SFC POT POTENTIOMETER

The SFC PS is a potentiometer for variable regulation of fan speed via frequency converters.

Dimensions	3 $^{15/16}$x3 $^{15/16}$x2 5/8 inches.
Resistance	10 kΩι

SFC VSS ROTARY SWITCH

The SFC POT is a rotary switch for 2-step regulation of fan speeds via frequency converters.

Dimensions	3 $^{15/16}$x3 $^{15/16}$x2 5/8 inches.
Increments	0-1-2

SFC SB SWITCH

The SFC SB is a switch for start/stop of fans via frequency converters.

Dimensions	2 $^{3/8}$x3 $^{1/8}$x2 $^{3/16}$ inches.
Enclosure class	IP 54
Power supply	Max 250 V, 16 A

ST 300

ST 300 PRESSURE SENSOR

The ST 300 maintains constant negative pressure in the discharge duct via a frequency converter that controls fan speeds. The ST 300 always provides the correct flow, regardless of the number of open and closed dampers.

Dimensions	3 9/16x3 3/4x1 7/16 inches.
Enclosure class	IP 54
Operating range	2, 4, 8, 12 IN/WG
Power supply	24 VDC
Output signal	0-10 V (alt. 4-20 mA)
Included accessories	Measurement output and 7 feet plastic tubing

S 400 CONTROL UNIT

The S 400 is used for automatic control of damper motor SAS 24 at terminals 1–4. Fans are normally controlled via the S 600 transformer units. The after-run time for evacuation of remaining gases is built into the control unit. The time is set between 0–15 min. The S 400 is supplied with 24 VAC from the S 600 transformer unit.

Dimensions	5 1/8x3 1/8x3 1/16 inches
Enclosure class	IP 54
Primary side	24 VAC
Secondary side	24 VAC

ACCESSORIES

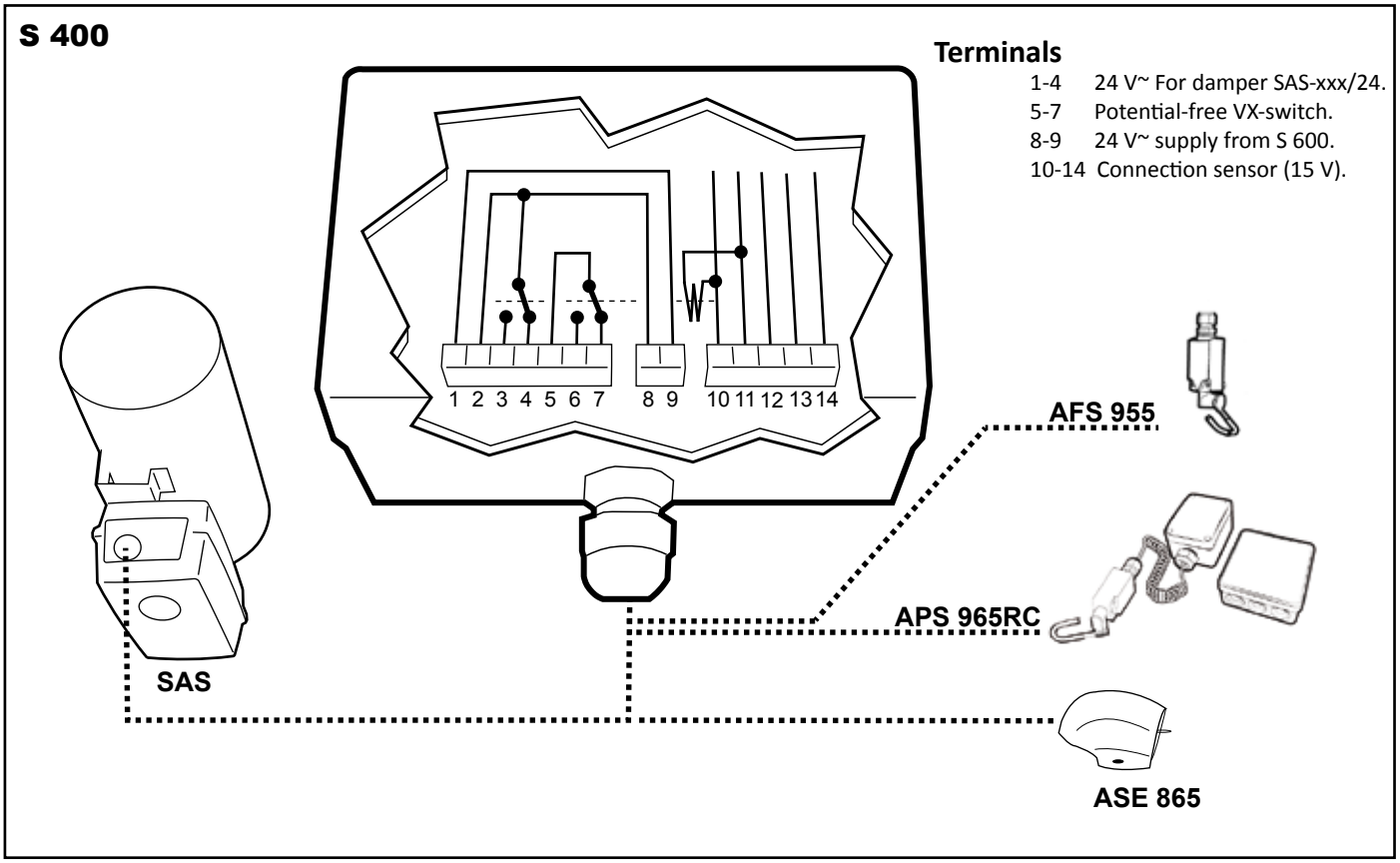
ASE 865 **Switch for hose reel mounted on a hose reel**, opens when the hose is pulled down and closes when the hose is fully rolled up.

AFS 955 **Switch for balancing block**, Single pole switch mounted on a balancing block. Switch is opened when the hose is pulled down and closed when the hose is fully drawn up. Supplemented with an electrical cable attached on the trolley on the profile rail.

APS 965RC **Switch with radio transmitter for profile rail** Micro switch mounted on the balancing block. When the hose is pulled down the switch opens and a radiotransmitter sends a signal to a receiver that opens a relay. The switch is closed when the hose is fully drawn up.

SMT 60 **Mechanical timer switch, 1 h**
The SMT mechanical timer switch is a manual timer, adjustable from 0 to 60 minutes. It can replace a PR T / KHT push-button unit. The SMT 60 is wall-mounted close to the extractor.

Dimensions	315/16x 315/16x 25/8
Timeset	0 - 60 min.

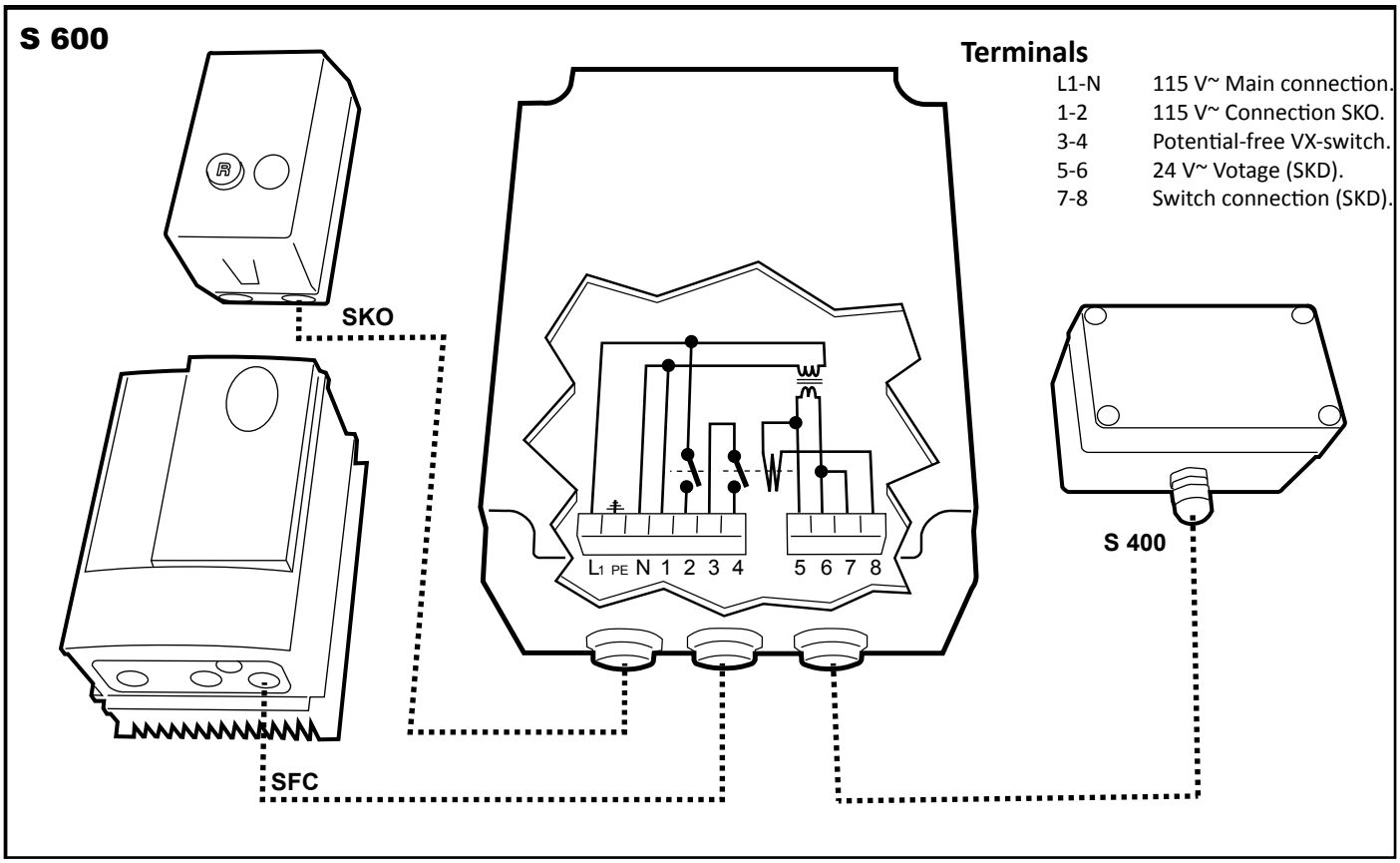


S 600

S 600 TRANSFORMER UNIT

The S 600 is used to supply 24 VAC to the S 400 control unit. Control of fan is made via external contactor 115 VAC, via signal from terminals 1 & 2. Frequency converter is controlled via the potential-free outputs, terminals 3 and 4. The S 600 can also be used in a custom system with the SKD connection box. The SKD distributes power to dampers and to the switch for automatic start/stop of fans, as well as automatic opening of SAS dampers.

Dimensions	5 $^{1/8}$x7 $^{1/6}$x4 $^{1/16}$ inches.
Enclosure class	IP 54
Primary side	115 VAC
Secondary side	24 VAC (60 VA)



S 200/115

S 200/115 CONTROL UNIT

The S 200/115 is used for start/stop of fan. The after-run time for evacuation of remaining gases is built into the pliers sensor (~30 sec.). For longer after-run times, there is an adjustable timer card (0–15 min. and 0–240 min.) available as an accessory. Single-phase fans (max. 1 HP) can be directly controlled via an integrated relay. Other fans are controlled with an external contactor via the same integrated relay, terminals 1–5. Frequency converters are controlled via the potential-free output, terminals 6–8.

Dimensions	7 1/16x5 1/8x3 1/16 inches
Enclosure class	IP 54
Primary side	115 VAC
Secondary side	115 VAC (Max 10A)

ACCESSORIES

SMT 60	Mechanical timer switch, 1 h
STK 15	Timer card 0-15 min
STK 240	Timer card 0-240 min
ASE 865	Switch for hose reel
AFS 955	Switch for balancing block
APS 965RC	Switch with radio transmitter for profile rail

S 200/115-24

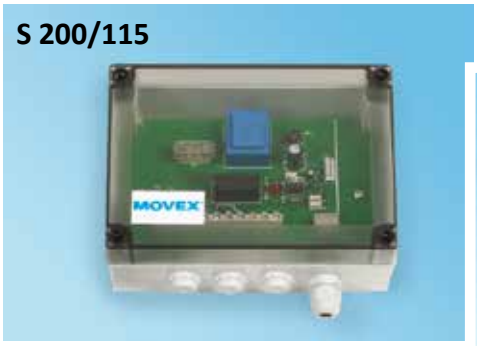
S 200/115-24 CONTROL UNIT

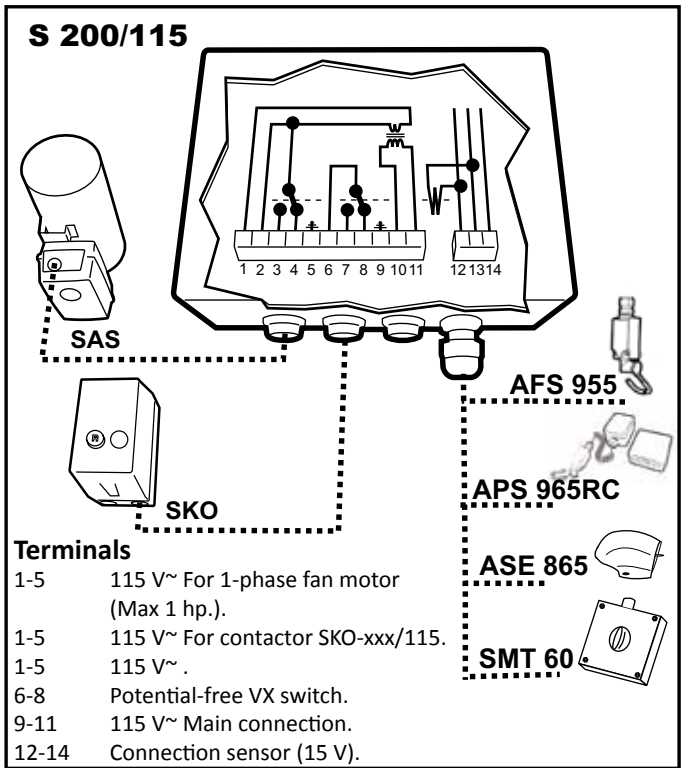
The S 200/24 is used for automatic control of damper motor SAS 24 and/or a fan. For longer after-run times, there is an adjustable timer card (0–15 min. and 0–240 min.) available as an accessory.
Fans are controlled with external contactors via the integrated relay, terminals 1–5. Frequency converters are controlled via the potential-free output, terminals 6–8.

Dimensions	7 1/16x5 1/8x3 1/16 inches
Enclosure class	IP 54
Primary side	115 VAC
Secondary side	24 VAC

ACCESSORIES

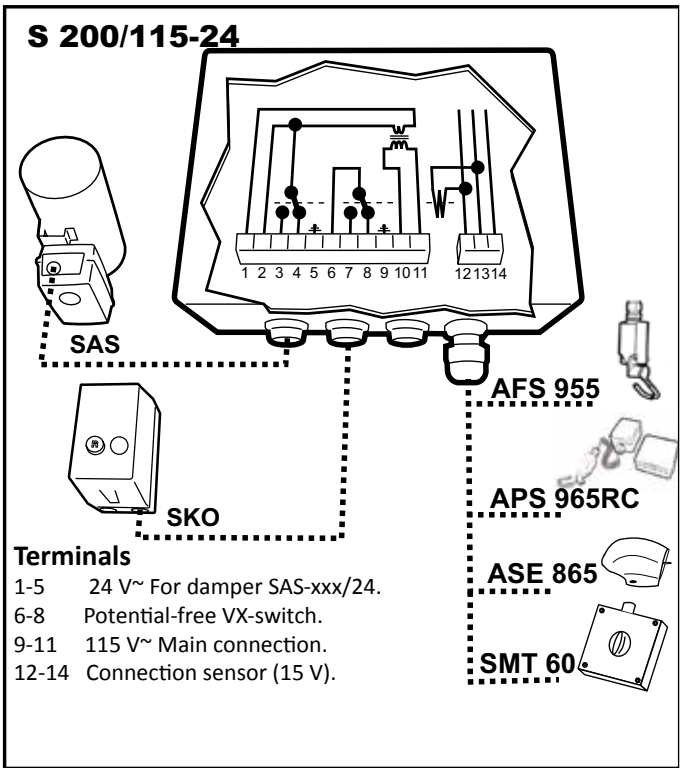
SMT 60	Mechanical timer switch, 1 h
STK 15	Timer card 0-15 min
STK 240	Timer card 0-240 min
ASE 865	Switch for hose reel
AFS 955	Switch for balancing block
APS 965RC	Switch with radio transmitter for profile rail





Terminals

1-5	115 V~ For 1-phase fan motor (Max 1 hp.).
1-5	115 V~ For contactor SKO-xxx/115.
1-5	115 V~ .
6-8	Potential-free VX switch.
9-11	115 V~ Main connection.
12-14	Connection sensor (15 V).



Terminals

1-5	24 V~ For damper SAS-xxx/24.
6-8	Potential-free VX-switch.
9-11	115 V~ Main connection.
12-14	Connection sensor (15 V).

SMB

SMB PROTECTIVE MOTOR SWITCH

The SMB is a 3-pole protective motor switch with thermal-magnetic release and equipped with phase failure protection. The SMB is designed for control and protection of fan motors.

Dimensions	**3 $^{11/16}$x5 $^{13/16}$x3 $^{5/16}$ inches**
Enclosure class	**IP 55**

Product	**Current range (A)**	**3-phase ~460 V (HP)**
SMB 10*	0,63-1,0	0.37
SMB 16*	1,0-1,6	0.5/0.75
SMB 25*	1,6-2,5	1
SMB 40*	2,5-4,0	1.5 / 2.0
SMB 63*	4,0-6,3	3.0
SMB 100*	6,0-10,0	5.5
SMB 140**	9,0-14,0	7.5
SMB 180**	13,0-18,	10

*Self-protecting, pre-fusing not required
**Max. pre-fusing when Ik>Icu is 63 A.

SKO

SKO CONTACTOR

The SKO is a 3-pole contactor with an overcurrent relay for manual resetting. The overcurrent relay has phase failure protection. It is used with external switches or control.

Dimensions	**4 $^{1/16}$x7 $^{7/8}$x6 inches**
Enclosure class	**IP 55**

Product	**Current range (A)**	**3-phase ~460 V (HP)**
SKO 10/115*	0,63-1,0	0.37
SKO 17/115*	1,0-1,6	0.5/0,75
SKO 25/115*	1,6-2,5	1
SKO 40/115*	2,5-4,0	1.5/2.0
SKO 60/115*	4,0-6,3	3.0
SKO 80/115*	6,0-10,0	5.5
SKO 130/115**	9,0-14,0	7.5
SKO 180/115**	13,0-18,	10

* Maximum power is 4 HP.
**Maximum power is 13 HP.

SAS

20201130

SAS AUTOMATIC DAMPER

The SAS is an automatic single-blade damper for applications where short operating times are necessary. The motor opens the damper blade in 7.5 seconds. This entails 95% extraction capacity after 3 seconds. The damper is supplied for air tightness class 1. For other air tightness classes, please contact Movex.

Dimensions (motor)	5 1/2x3 15/16x3 3/8
Material (cowling)	PA
Material (damper housing)	Galvanized sheet metal
Opening time, 90º	7,5 s
Torque	3 Nm
Power consumption	
(24 V)	2 VA in operation/ 0 VA not in operation
Power consumption	
(230 V)	5 VA in operation/ 0 VA not in operation

Product	Diameter (inch)	Voltage (V)
SAS-100/24	Ø3 15/16	24
SAS-125/24	Ø4 15/16	24
SAS-160/24	Ø6 5/16	24
SAS-200/24	Ø7 7/8	24
SAS-250/24	Ø9 13/16	24
SAS-315/24	Ø12 3/8	24

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