FUMEX® CONTROL UNITS



LOCAL EXTRACTORS

Fumex's control unit offers a good working environment, adapted to all types of facilities. The right choice of control units is also very 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 satisfy most needs. Local extraction arms are presented in various system solutions in the examples. Automation can even be used in other applications, such as when connecting extractors directly to machinery. For control of automotive exhaust installations, see the control automation for exhaust extraction. Most types of sensors such as for gas, heat, light and vibrations can be combined with the S 200 and S 400 control units. For help in optimising extractor installations or calculating energy savings, please contact Fumex.

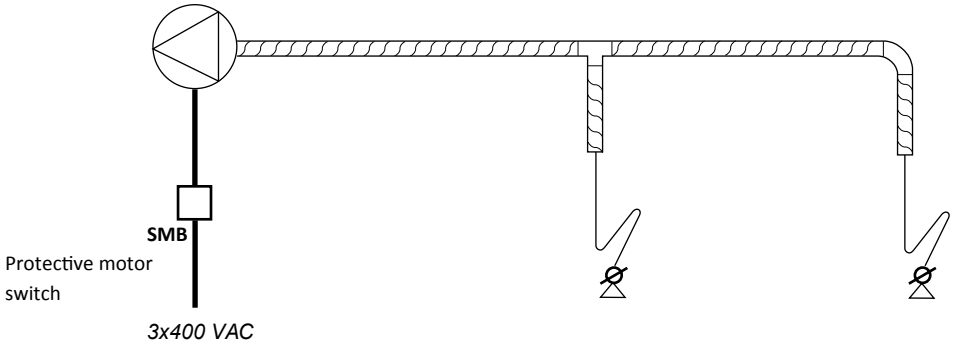
Fumex also offers a range of local extractors, fans, accessories and filters to our local extractors.

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Start and stop of fans, with or without speed control.

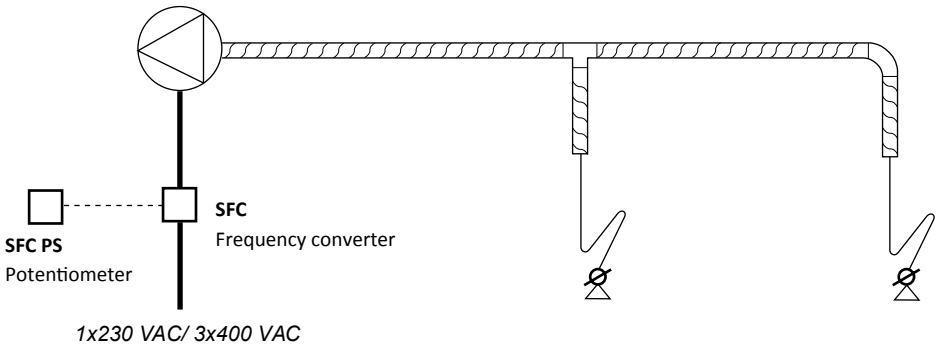
System 1:1
Manual start and stop of fan

The fan is manually started and stopped with a protective motor switch SMB.
The protective motor switch has a thermal-magnetic release and phase failure protection.



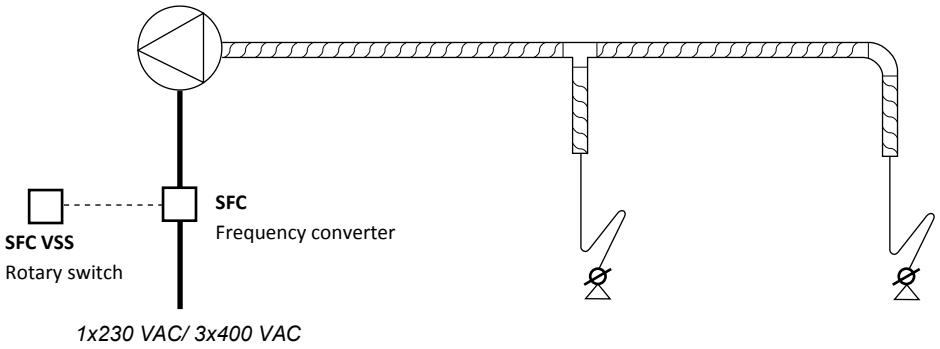
System 1:2
Manual speed control of fan that is started and stopped with external signal

The signal for starting and stopping the fan is produced with an external signal from, for example, a central monitoring system.
The fan's speed is regulated manually as necessary with the SFC PS potentiometer.



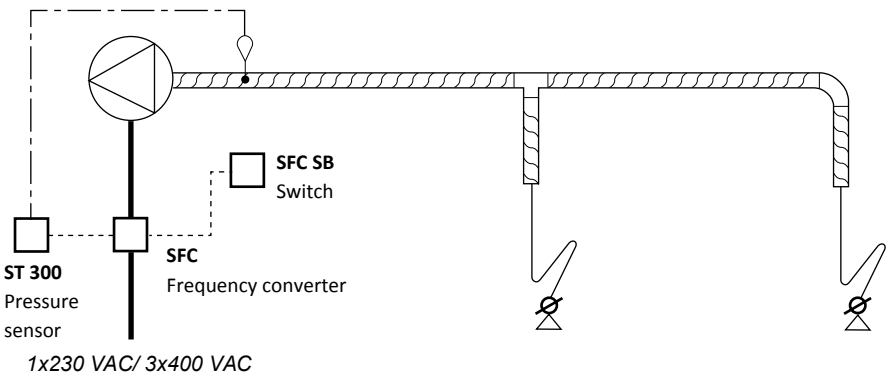
System 1:3
Manual start and stop of fan and two speeds

The fan is manually started and stopped with the SFC VSS rotary switch.
With the rotary switch, the fan speed can be regulated between two preset speeds that are programmed on the frequency converter display.



System 1:4
Manual start and stop of fan and need-adapted control of fan speed

The fan is manually started and stopped with the SFC SB switch.
The frequency converter maintains a constant negative pressure in the main duct via the pressure sensor.



1x230/ 3x400 VAC
Signal cable
Hose

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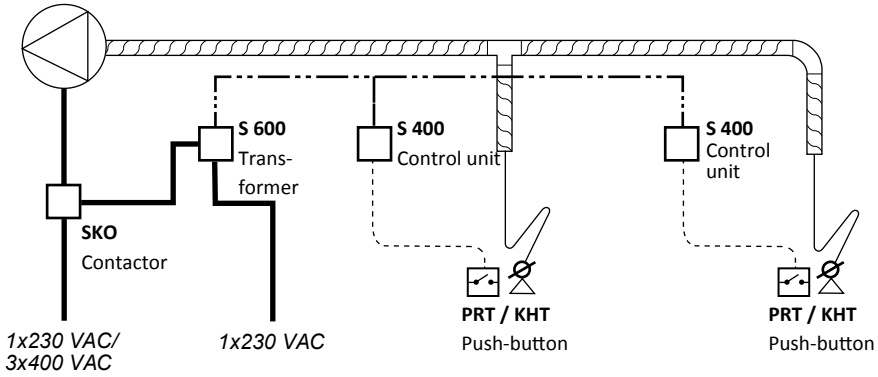
Start and stop fans with contactor.

Manual control from work station with time delay

System 2:2
Manual start and stop of fan.

Start and stop is made manually with a push-button mounted on the extractor.

The S 400 control unit has a built-in adjustable time delay of 0 - 15 minutes.

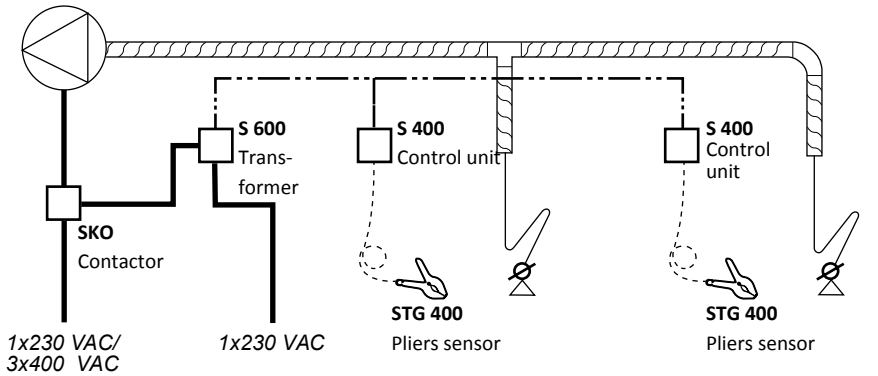


Automatic control from work station with time delay.

System 2:3
Automatic starting and stopping of fan.

Starting and stopping are conducted automatically with the STG 400 pliers sensor, which is clipped onto the earth cable of the welding transformer.

The S 400 control unit has a built-in adjustable time delay of 0–15 minutes.



1x230/ 3x400 VAC
24 VAC
Signal cable

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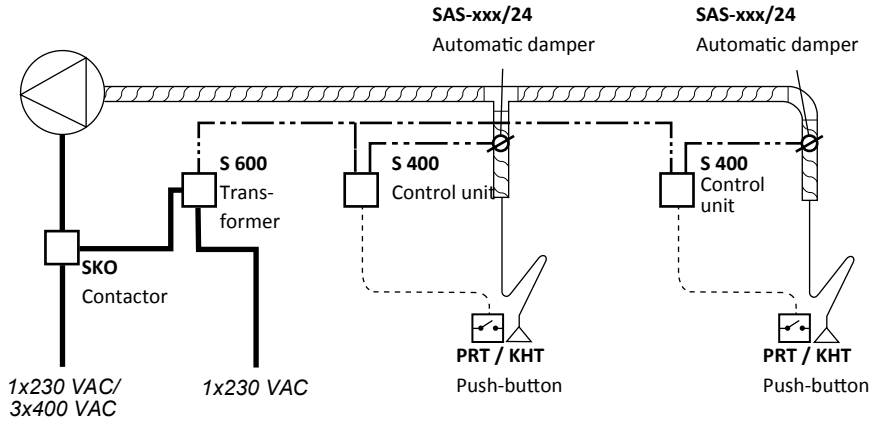
Individual damper control and start and stopping of fan via contactor

Damper and contactor manually controlled from the work station with time delay

System 3:2
Manual control of damper and start and stop of fan
Opening and closing of the damper is made manually via a push-button mounted on the extractor.

A control signal from the control unit starts and stops the fan.

The S 400 control unit has a built-in adjustable time delay of 0–15 minutes.

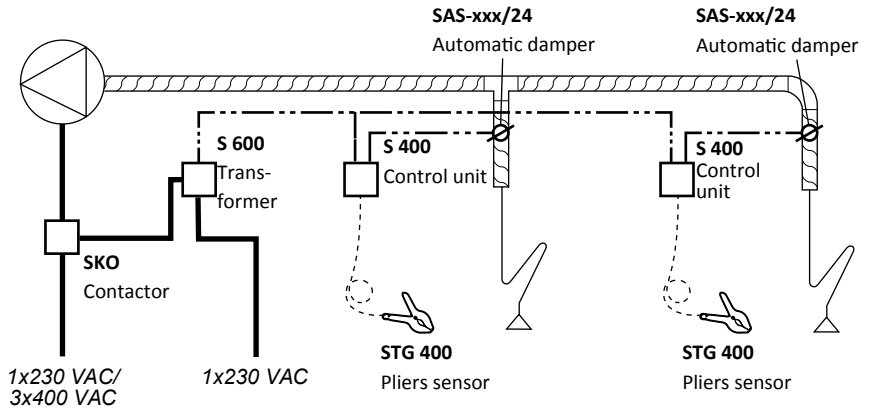


Damper and contactor automatically controlled from the work station with time delay

System 3:3
Automatic control of damper and start and stop of fan
The damper opened and closed automatically with the STG 400 pliers sensor, which is clipped onto the earth cable of the welding transformer.

A control signal from the control unit starts and stops the fan.

The S 400 control unit has a built-in adjustable time delay of 0–15 minutes.



1x230/ 3x400 VAC
24 VAC
Signal cable

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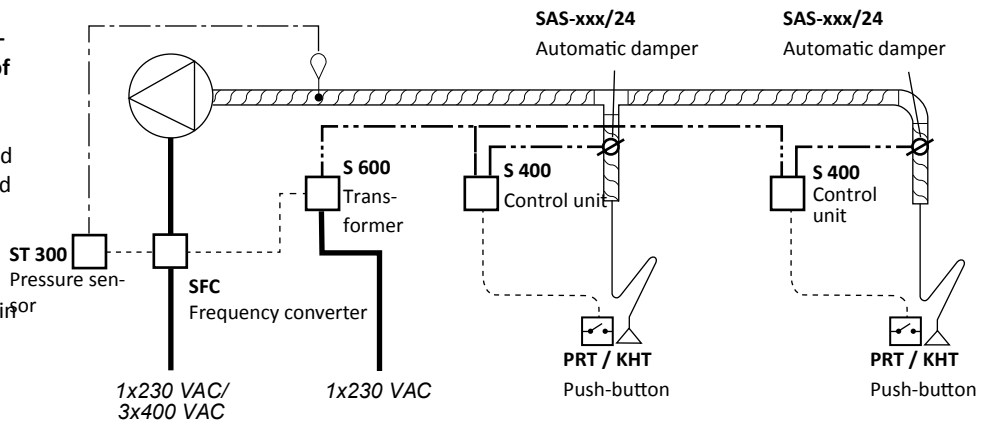
Individual damper control and need-adapted control of fan via a pressure sensor and frequency converter

Damper and frequency converter manually controlled from the work station with time delay

System 4:2
Manual control of damper and need-adapted control and start and stop of fan
The damper is opened and closed manually with a push-button mounted on the extractor, which also starts and stops the fan.

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

The S 400 control unit has a built-in adjustable time delay of 0–15 minutes.

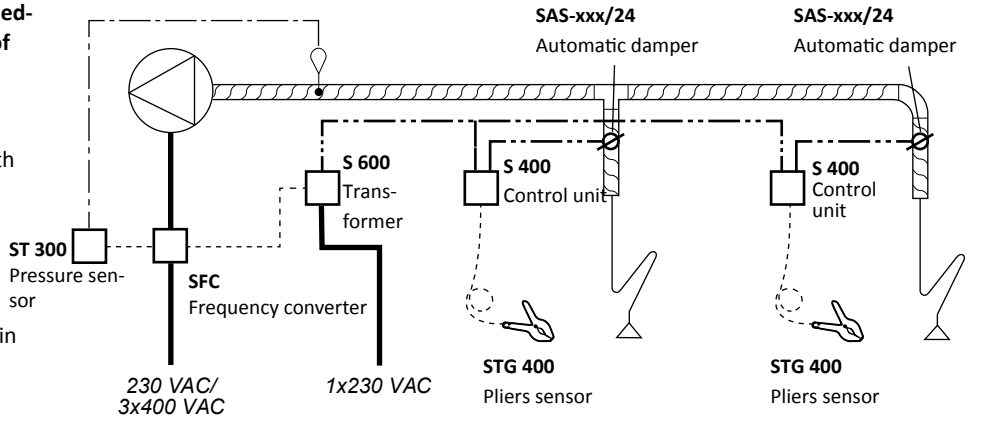


Damper and frequency converter automatically controlled from the work station with time delay

System 4:3
Automatic control of damper and need-adapted control and start and stop of fan
The damper is opened and closed automatically with the STG 400 pliers sensor, which is clipped onto the earth cable of the welding transformer.
A control signal from the control unit starts and stops the fan.

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

The S 400 control unit has a built-in adjustable time delay of 0–15 minutes.



1x230/ 3x400 VAC
24 VAC
Signal cable
Hose

FUMEX®

SFC



FREQUENCY CONVERTER
Designed for process ventilation

The SFC frequency converter is designed for variable speed control of e.g. fans. This provides optimal operating economy 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 SFC VSS is used if a 2-step control is preferred.

Interference filters are included. The enclosure class is IP 21 for built-in applications, alternatively IP 55 for dust- and water protection.
Fumex can supply SFC PROG pre-programmed frequency converters to make it easier to put systems in operation.

For alternative voltages, etc., please contact Fumex.

ENCLOSURE CLASS IP 21

Designation	Rated power kW	Rated current A	Voltage V 1- phase 3-phase	Weight kg	Width mm	Height mm	Depth mm
SFC 037/21-1	0,37	3,3	230	1,5	72	145	130
SFC 037/21-3	0,37	1,5	400	1,8	105	143	150
SFC 055/21-1	0,55	3,7	230	1,5	72	145	140
SFC 055/21-3	0,55	1,9	400	1,8	105	143	150
SFC 075/21-1	0,75	4,8	230	1,5	72	145	140
SFC 075/21-3	0,75	2,3	400	1,8	105	143	150
SFC 110/21-1	1,1	6,9	230	1,8	105	143	150
SFC 110/21-3	1,1	3	400	1,8	105	143	150
SFC 150/21-1	1,5	8	230	1,8	105	143	150
SFC 150/21-3	1,5	4,1	400	1,8	105	143	150
SFC 220/21-1	2,2	11	230	3,1	140	184	150
SFC 220/21-3	2,2	5,5	400	3,1	140	184	150
SFC 400/21-3	4	9,5	400	3,1	140	184	150
SFC 750/21-3	7,5	17	400	6,5	180	232	170

ENCLOSURE CLASS IP 55

Designation	Rated power kW	Rated current A	Voltage V 1- phase 3-phase	Weight kg	Width mm	Height mm	Depth mm
SFC 037/55-1	0,37	3,3	230	6,3	210	240	163
SFC 037/55-3	0,37	1,5	400	8,8	215	297	192
SFC 055/55-1	0,55	3,7	230	6,3	210	240	163
SFC 055/55-3	0,55	1,9	400	8,8	215	297	192
SFC 075/55-1	0,75	4,8	230	6,3	210	240	163
SFC 075/55-3	0,75	2,3	400	8,8	215	297	192
SFC 110/55-1	1,1	6,9	230	8,8	215	297	192
SFC 110/55-3	1,1	3	400	1,8	215	297	192
SFC 150/55-1	1,5	8	230	8,8	215	297	192
SFC 150/55-3	1,5	4,1	400	8,8	215	297	192
SFC 220/55-1	2,2	11	230	10,7	230	340	208
SFC 220/55-3	2,2	5,5	400	10,7	230	340	208
SFC 400/55-3	4	9,5	400	10,7	230	340	208
SFC 750/55-3	7,5	17	400	23,6	320	425	290

FUMEX

SFC PS/VSS/SB



SFC POT POTENTIOMETER

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

Dimensions	100x100x67 mm
Resistance	10 kΩ

SFC VSS ROTARY SWITCH

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

Dimensions	100x100x67 mm
Increments	0-1-2

SFC SB SWITCH

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

Dimensions	60x80x55 mm
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	90x96x36 mm
Enclosure class	IP 54
Operating range	500, 1000, 2000, 3000 Pa
Power supply	24 VDC
Output signal	0-10 V (alt. 4-20 mA)
Inc. accessories	Measurement output and 2 m hose

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S 400

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	130x80x77 mm
Enclosure class	IP 54
Primary side	24 VAC
Secondary side	24 VAC

SMT 60 TIMER SWITCH

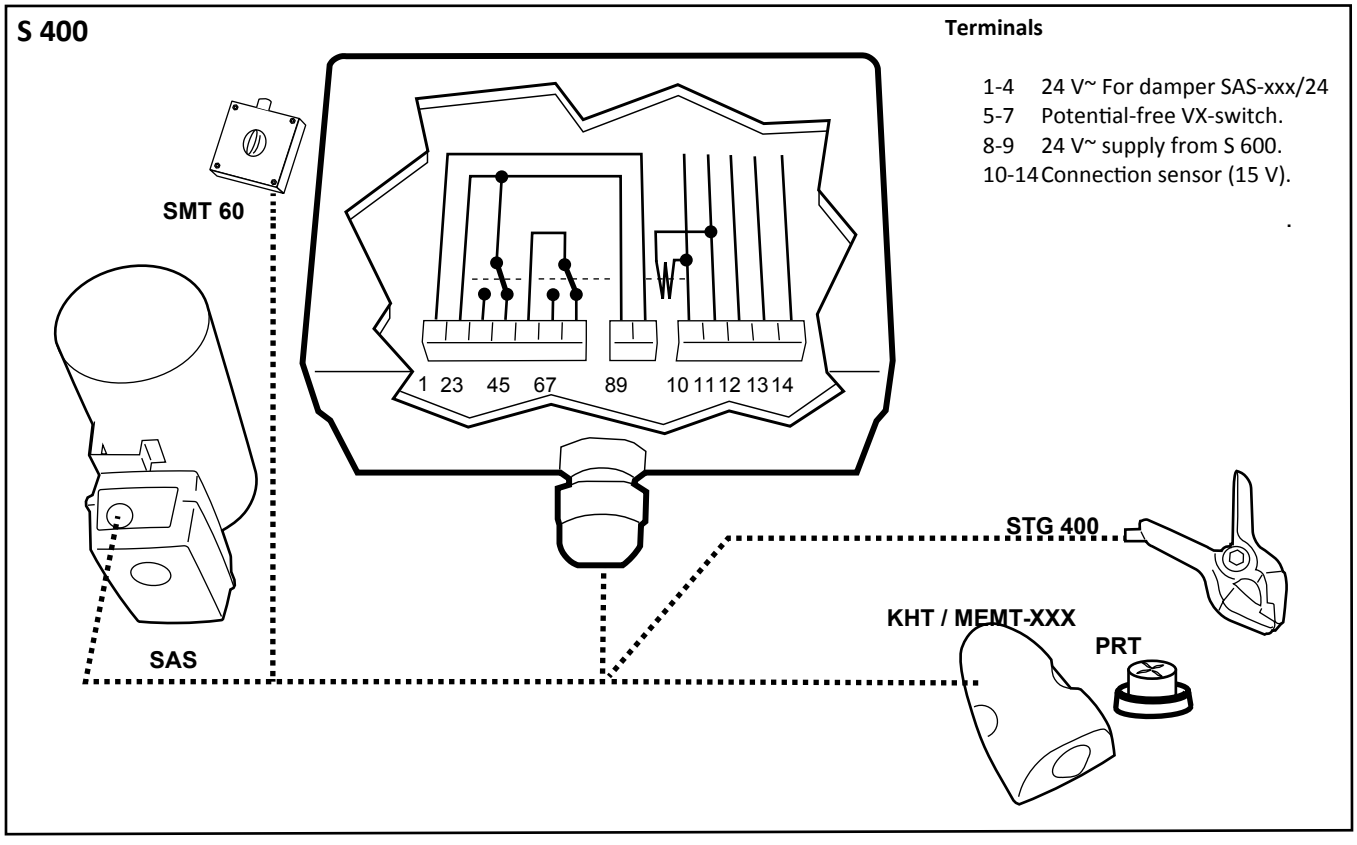
The SMT mechanical timer switch is a manual timer, adjustable from 0 to 60 minutes. It can replace a KHT push-button unit. The SMT 60 is wall-mounted close to the extractor.

Dimensions	100x100x67 mm
Timeset	0 - 60 min.

ACCESSORIES

SSB	Switch
STG 400	Clip-on sensor
KHT / MEMT	Push-button unit
PRT	Push-button unit





Terminals

1-4	24 V~ For damper SAS-xxx/24
5-7	Potential-free VX-switch.
8-9	24 V~ supply from S 600.
10-14	Connection sensor (15 V).

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S 600



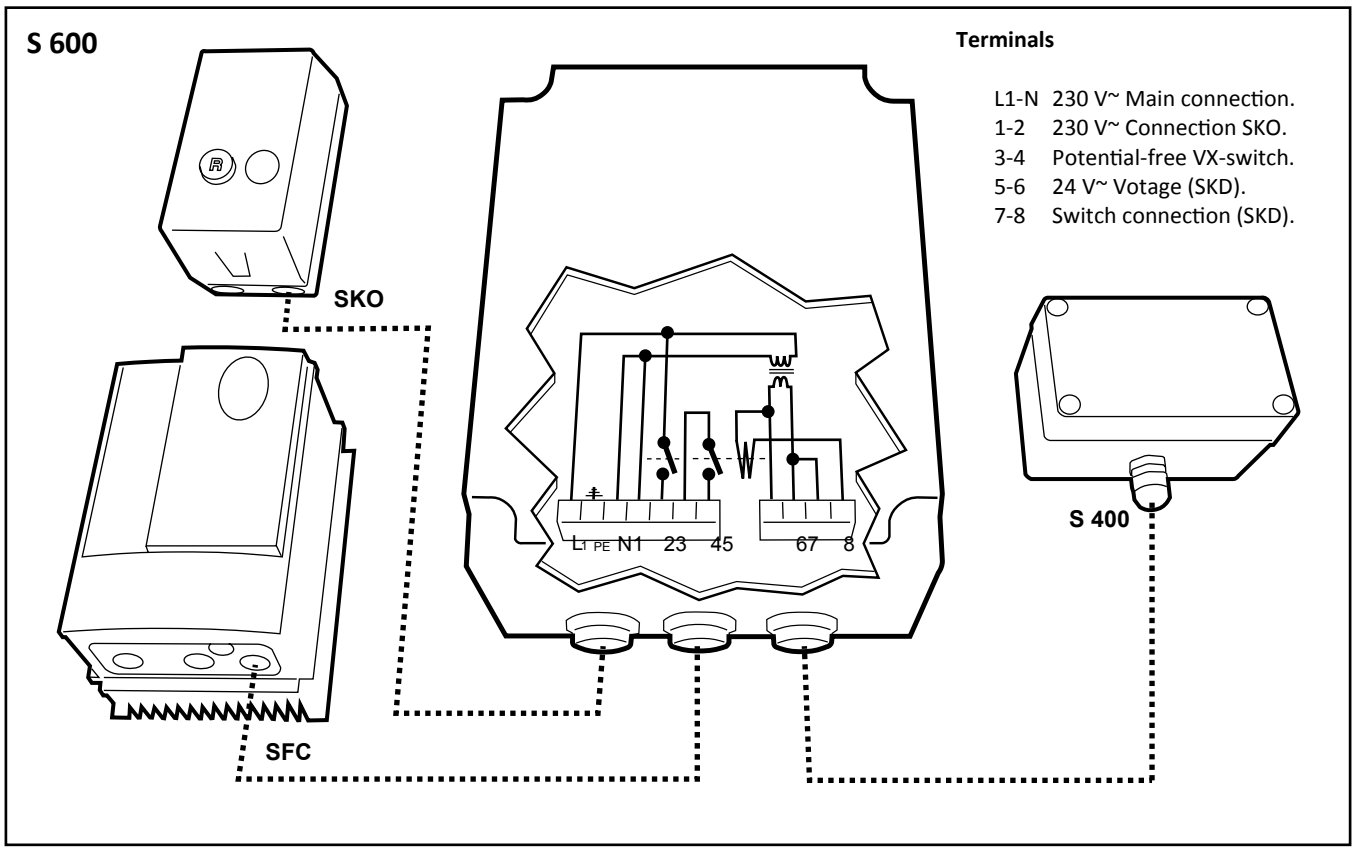
S 600 TRANSFORMER UNIT

The S 600 is used to supply 24 VAC to the S 400 control unit. Control of fan is made via external contactor 230 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 KHT 600 for automatic start/stop of fans, as well as automatic opening of SAS dampers.

Dimensions	130x180x102 mm
Enclosure class	IP 54
Primary side	230 VAC
Secondary side	24 VAC (60 VA)

ACCESSORIES

SKD	Connection box
KHT 600	2-pole switch
SMT 60	Mechanical timer switch, 1 h



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S 200/230

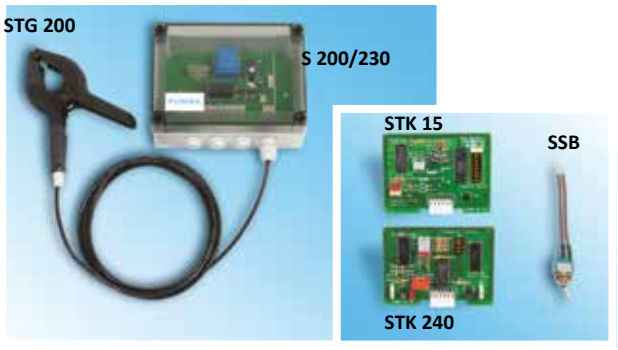
S 200/230 CONTROL UNIT

The S 200/230 is used for automatic control of damper motor SAS 230 and/or a 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. 0.75 kW) 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	180x130x77 mm
Enclosure class	IP 54
Primary side	230 VAC
Secondary side	230 VAC (Max 10A)

ACCESSORIES

STK 15	Timer card 0-15 min
STK 240	Timer card 0-240 min
SSB	Switch
STG 200	Pliers sensor (~30s delay)
KHT	Push-button unit



S 200/24

S 200/24 CONTROL UNIT

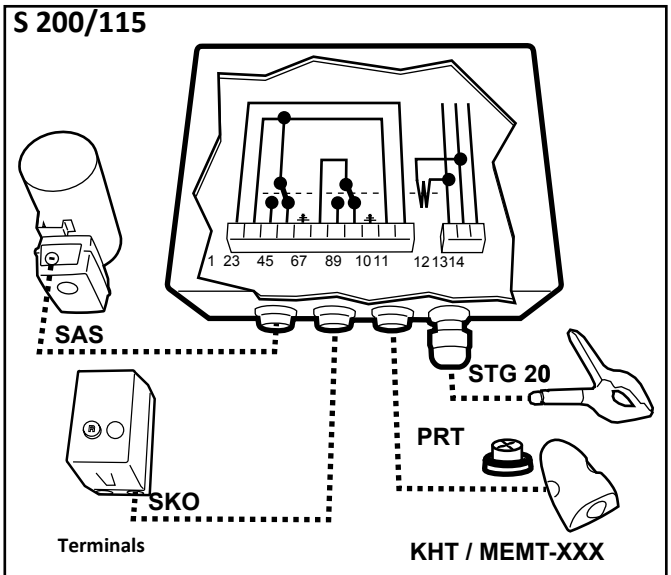
The S 200/24 is used for automatic control of damper motor SAS 24 and/or a fan. The after-run time for evacuation of remaining gases is built into the pliers sensor (~30 sec.). For longer after-run times, there is an adjustable timer card (0–15 min. and 0–240 min.) available as an accessory.
Fans are controlled with external contactors via the integrated relay, terminals 1–5. Frequency converters are controlled via the potential-free output, terminals 6–8.

Dimensions	180x130x77 mm
Enclosure class	IP 54
Primary side	230 VAC
Secondary side	230 VAC

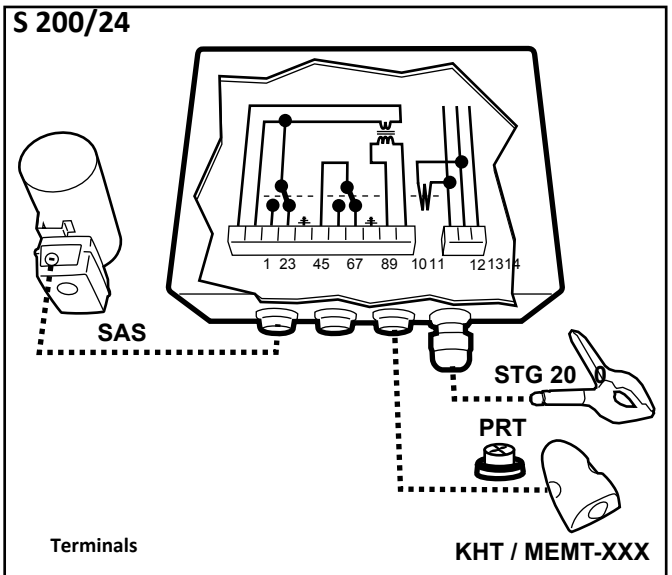
ACCESSORIES

STK 15	Timer card 0-15 min
STK 240	Timer card 0-240 min
SSB	Switch
STG 200	Pliers sensor (~30s delay)
KHT	Push-button unit





1-5	230 V~ For damper SAS-xxx/230.
6-8	Potential-free VX switch.
9-11	230 V~ Main connection.
12-14	Connection sensor (15 V).



1-5	24 V~ For damper SAS-xxx/24.
6-8	Potential-free VX-switch.
9-11	230 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	93x148x84 mm
Enclosure class	IP 55

Product	Current range (A)	3-phase ~400 V (kW)
SMB 10*	0,63-1,0	0,25
SMB 16*	1,0-1,6	0,37/0,55
SMB 25*	1,6-2,5	0,75
SMB 40*	2,5-4,0	1,1/1,5
SMB 63*	4,0-6,3	2,2
SMB 100*	6,0-10,0	4,0
SMB 140**	9,0-14,0	5,5
SMB 180**	13,0-18,0	7,5

* 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	103x200x153 mm
Enclosure class	IP 55

Product	Current range (A)	3-phase ~400 V (kW)
SKO 10/230*	0,63-1,0	0,25
SKO 17/230*	1,0-1,7	0,37/0,55
SKO 25/230*	1,6-2,5	0,75
SKO 40/230*	2,5-4,0	1,1/1,5
SKO 60/230*	4,0-6,0	2,2
SKO 80/230*	5,5-8,0	4,0
SKO 130/230**	9,0-13,0	5,5
SKO 180/230**	12,0-18,0	7,5

* Maximum power is 4 kW.
**Maximum power is 7.5 kW.

SAS





SAS AUTOMATIC DAMPER

The SAS is an automatic single-leaf damper for applications where short operating times are necessary.
The extremely fast 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 Fumex.

Dimensions (motor)	140x100x85 mm
Material (cowling)	PA
Material (damper housing)	Galvanised sheet metal
Opening time,	90º 7,5 s
Torque	3 Nm
Power consumption	(24 V) 2 VA i drift/ 0 VA i vila
Power consumption	(230 V)5 VA i drift/ 0 VA i vila

Product	Diameter (mm)	Voltage (V)
SAS-100/24	Ø100	24
SAS-125/24	Ø125	24
SAS-160/24	Ø160	24
SAS-200/24	Ø200	24
SAS-250/24	Ø250	24
SAS-315/24	Ø315	24
SAS-100/230	Ø100	230
SAS-125/230	Ø125	230
SAS-160/230	Ø160	230
SAS-200/230	Ø200	230
SAS-250/230	Ø250	230
SAS-315/230	Ø315	230

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With provision for changes

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