

SYSTEM CONTROL PANELS

SYSTEM CONTROL PANELS 3 - 5,5 - 7,5 - 11 - 22 KW

Intelligent UL 508A-certified control panel for push-pull systems. The built-in Danfoss frequency drive arranges the necessary fan speed. The PID control loop keeps the duct pressure at a constant level in order to optimize preset push-pull parameters. The filter cleaning device in the connected filter system is monitored by an analog pressure sensor and controlled by a PLC.



SPECIFICATIONS

■ Physical dimensions and properties	
Material enclosure	sheet metal
Colour	grey RAL 7035
Protection class	NEMA 4 (IP 66)
■ Main components (refer to image on next page)	
1 Enclosure	Eldon
2 Main switch	rotary disconnect
3 Frequency drive	Danfoss FC102, IP20
4 PLC	Siemens LOGO! 24RC
5 Analog expansion module	Siemens LOGO! AM2
Digital expansion module (for Multi-DustBank only)	Siemens LOGO! TD
6 Text display	Siemens LOGO! TD
7 Terminal block	
8 Cooling fan	Rittal SK3323.107, 230V
9 Exhaust grill	UL 508 type 1
10 Control transformer	Ismet, 150 VA
11 Buzzer	
12 Fuses power circuit	class CC or class J
13 Fuses control circuit	5 x 20 mm
14 Pilot lights	POWER ON / SYSTEM FAILURE / FAN RUNNING
15 Push buttons	AUTO START / STOP / MANUAL START
■ Characteristics frequency drive	
Type	Danfoss FC 102
Suitable for HVAC	yes
Service and support	world-wide
Certifications	CE, UL, c-UL-us, C-tick
Power range	1.1-1000 kW
Voltage range	200-240V, 380-480V, 525-600V
Graphical display	yes
Enclosure rating	IP 20 and IP 54
EMC filter	built-in
PTC input	yes
Analog inputs	2 (0-10V, 4-20 mA)

Digital outputs	6
Closed loop PID control	yes
Programmable relay outputs	2
Software	MCT-10 (free)
Country of origin	Denmark
Real time clock (data logging)	yes
Communication	RS-485, USB
Cooling	intelligent on-demand cooling
Sound level	67 dB(A)
■ Ambient conditions	
Operating temperature:	<ul style="list-style-type: none"> • min. 5°C (41°F) • nom. 20°C (68°F) • max. 40°C (104°F)
Max. relative humidity	80% (non condensing)
Outdoor use allowed	no
Storage conditions	<ul style="list-style-type: none"> • 5-45°C (41-113°F) • relative humidity max. 80%
■ Product combinations	
PT-1000	pressure transmitter
MDB + CB-MDB/PMD	central filter unit with control box
Sound insulated fan:	Power:
<ul style="list-style-type: none"> • SIF-700 LI/RI • SIF-900 LI/RI • SIF-1200 LI/RI • SIF-1500 LI/RI • SIF-2000 LI/RI 	<ul style="list-style-type: none"> • 3 kW (4 HP) • 5,5 kW (7.5 HP) • 7,5 kW (10 HP) • 11 kW (15 HP) • 22 kW (30 HP)
■ Options	
RC-SCP	remote control when system control panel is installed out of reach of operator
■ Order information	
Article number	refer to Table 1
Number/package	1
■ Shipping data	
Harmonized Tariff Code	8537.1091.90
Country of origin	the Netherlands

APPROVALS/CERTIFICATES



ref. UL-508A

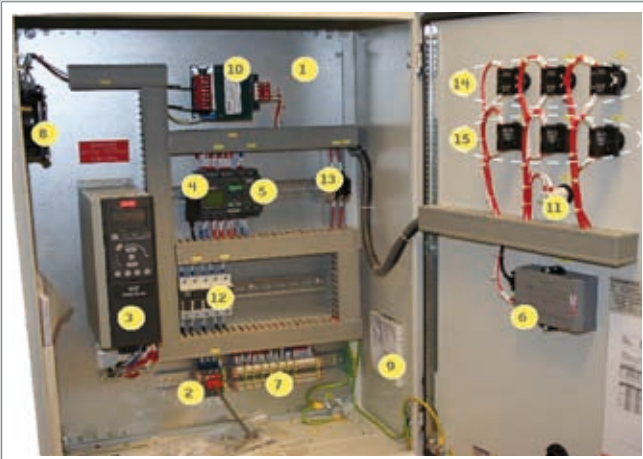
Table 1

	3 kW (4 HP)	5,5 kW (7.5 HP)	7,5 kW (10 HP)	11 kW (15 HP)	22 kW (30 HP)
Article no.: • 380-480V • 600V	7900022000 7900022020	7900022100 7900022120	7900022200 7900022220	7900022300 7900022320	7900022400 7900022420
Dimensions H x W x D	800 x 600 x 300 mm	800 x 600 x 300 mm	800 x 600 x 300 mm*	1000 x 800 x 300 mm	1200 x 800 x 300 mm
Frequency drive: • 380-480V • 600V	Danfoss FC102 • 3 kW • 4 kW	Danfoss FC102 • 5.5 kW • 7.5 kW	Danfoss FC102 • 7.5 kW • 11 kW	Danfoss FC102 • 11 kW • 15 kW	Danfoss FC102 • 22 kW • 30 kW
Weight (net)	55 kg (121 lbs)	60 kg (132 lbs)	60 kg (132 lbs)	85 kg (187 lbs)	105 kg (231 lbs)
Transformer	150 VA	150 VA	150 VA	150 VA	150 VA
Fuses power circuit: • 380-480V • 600V	class CC • 10 A and 500 mA • 15 A and 500 mA	class CC • 20 A and 500 mA • 25 A and 500 mA	class CC • 25 A and 500 mA • 30 A and 500 mA	class J (600V) and CC • 30 A and 500 mA • 35 A and 500 mA	class J and CC • 60 A and 500 mA • 60 A and 500 mA
Fuses control circuit	• 5x20 mm; 0.3 + 2.5 A	• 5x20 mm; 0.3 + 2.5 A	• 5x20 mm; 0.3 + 2.5 A	• 5x20 mm; 0.3 + 2.5 A	• 5x20 mm; 0.3 + 2.5 A
Cooling fan: • 380-480V • 600V	Rittal, 230V, type: • SK3322.107 • SK3322.107	Rittal, 230V, type: • SK3323.107 • SK3323.107	Rittal, 230V, type: • SK3323.107 • SK3323.107	Rittal, 230V, type: • SK3323.107 • 2x SK3322.107	Rittal, 230V, type: • 2x SK3323.107 • 2x SK3324.107

* Dimensions 600V: 1000 x 800 x 300 mm

MAIN COMPONENTS

(refer to specifications on previous page)



FEATURES

Rittal housing:
ABB rotary switch prevents opening. Box needs to be de energized before opening.



Siemens PLC:
• proven reliability
• high service level by Siemens and Plymovent



Siemens display:

Provides all necessary information without opening the box.

Function keys:

- F1: status counters: total hours - filter hours - filter pulses - motor failure
- F1: suppress buzzer
- F1 and F4 together: reset hour counters except total hours
- F2: Push once, counter online cleaning and filter failure
- F3: Push once, test cleaning cycle 5 minutes
- F3: Push 5 seconds, start manual cleaning cycle 1 h 30 min.



Danfoss frequency drive:

- software implementation: plug & play
- very easy to control with free MTC-10 software; drive settings can be changed real time via USB port
- compact IP 55 inclosure
- full support by Plymovent



Buzzer emits signal when:

- frequency drive trips
- filter cleaning cycle has failed
- compressed air is not available

Product type

Article no.

Product category

Version

System control panels

refer to Table 1

electrical components

030211/A

Always check the latest version on www.plymovent.com.