

CONTROLPRO

CONTROL PANEL + HMI



ControlPro is an intelligent platform that controls a filter system MDB PRO, SCS PRO or EDS PRO and the connected extraction fan. It contains an extensive feature package to monitor and arrange the RamAir™ pulse amplifier (filter cleaning system), the required airflow and the corresponding fan speed. By means of the user-friendly HMI you can program all desired parameters. The HMI gives a clear insight into the system status and performance at all times.

ControlPro allows for remote access via a network connection.





SPECIFICATIONS

ControlPro/Panel	
Physical dimensions and properties	
Material (housing)	sheet metal
Dimensions	400 x 400 x 210 mm (15.7 x 15.7 x 8.3 in.)
• incl. switches and cable glands	• 435 x 425 x 240 mm (17.1 x 16.7 x 9.4 in.)
Weight (net)	11 kg (24 lbs.)
Protection class	IP 65
Inputs	
8x	digital input (10 mA wetting current)
3x	analogue input (4-20 mA)
Outputs	
2x	relay output (max. 30 VDC, 2,5 A)
2x	output "low-side switch" (24 VDC, 2,5 A)
1x	output "low-side switch" (24 VDC, 250 mA)
4x	output "low-side switch" (24 VDC, 30 mA)
1x	analogue output (4-20 mA)
Internal connectors	
2x	CAN + power (ControlPro/HMI & Control/SlaveBoard)
1x	RS-485 (Modbus) to frequency inverter (19200,8N1)
1x	USB 2.0 (host only, USB A receptacle)
1x	ethernet (for service purposes)
1x	RS-232 (for service purposes)
Internal pressure sensors	
2x	integrated pressure sensor Working range 0-4000 Pa (0-16 in. WG)
Electrical data	
Input voltage	100-240 VAC, 50-60Hz
Internal operating voltage	24 VDC
Power consumption	max. 60W

Ambient conditions			
Operating temperature:	Pressure sensors:		
	• min.	internal: 0°C (32°F)	external: -20°C (-4°F)
	• nom.	+20°C (68°F)	+20°C (68°F)
	• max.	+50°C (122°F)	+50°C (122°F)
Max. relative humidity	80%		
Outdoor use allowed	yes		
Storage conditions	• -20-50°C (-4-122°F) • relative humidity max. 80%		
Guidelines & standards			
EMC 2014/30 EU	LVD 2014/35 EU		
EN 61000-6-2	IEC 60204-1		
EN 61000-6-4	IEC 61131-2		
	IEC 61439-1		
Approvals & certificates			
			
			
	ref. UL-508A		

ControlPro/HMI	
Physical dimensions and properties	
Material (housing)	PC/ABS
• flammability standard	• UL94 V-0
Dimensions	255 x 165 x 125 mm (10.0 x 6.5 x 4.9 in.)
Weight (net)	900 g (2 lbs.)
Display:	
• size	• 7 inch
• type	• resistive touch screen
• brightness	• 300 cd/m ²
• colour	• 262K
• resolution	• 800 x 480 pixels

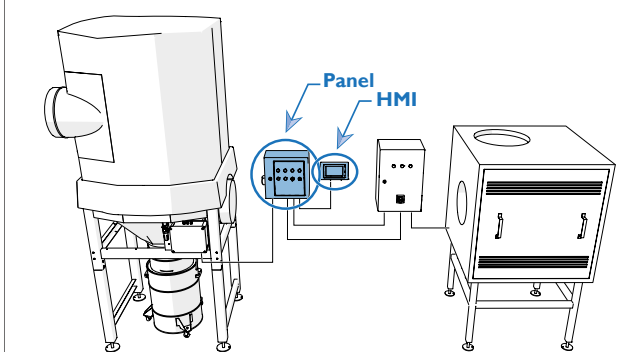
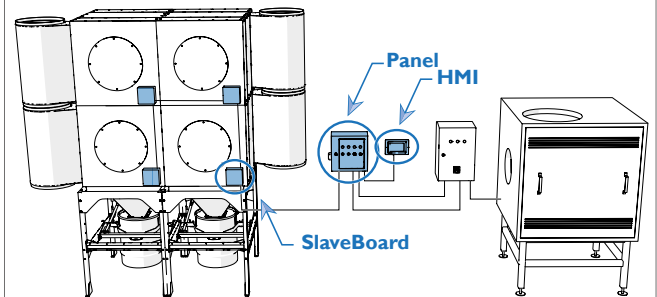
Available languages	English Dutch German French Spanish (& counting)
External connectors	
1x	CAN + power (connection to Panel) [M12-5p shielded connector]
1x	USB 2.0 (host only) [USB A receptacle, with dust cap]
1x	ethernet 10/100 Mbit/s [RJ45, shielded, with dust cap]
Electrical data	
Operating voltage	24 VDC (+/- 15%)
Power consumption	• display off: nom. 4W • display on: max. 5W
Ambient conditions	
Operating temperature:	
• min.	• 0°C (32°)
• nom.	• +20°C (68°F)
• max.	• +50°C (122°F)
Outdoor use allowed	no
Storage conditions	• 0-50°C (32-122°F) • relative humidity max. 80%
Guidelines & standards	
EMC 2014/30 EU EN 61000-6-2 EN 61000-6-4	LVD 2014/35 EU IEC 60204-1
Approvals & certificates	
	

Control/SlaveBoard	
Physical dimensions and properties	
Material (housing)	PC/ABS
Dimensions	175 x 175 x 75 mm (6.9 x 6.9 x 3 in.)
Internal connectors	
2x	CAN + power (max. 24 VDC, 2,5A)
Electrical data	
Operating voltage	24 VDC (+/- 15%)
Current	max. 2,5 A
Ambient conditions	
<i>The ambient conditions of the MDB or SCS/EDS filter system apply</i>	
Guidelines & standards	
EMC 2014/30 EU EN 61000-6-2 EN 61000-6-4	LVD 2014/35 EU IEC 60204-1
Approvals & certificates	
	

General	
Where used	
MDB PRO	central filter system
SCS PRO	
EDS PRO	Environmental Diluter System

Product combinations	
Extraction fan:	
• SIF (Outdoor)	• extraction fan
• FRAME SIF	• fan mounting frame
Fan control equipment:	
• VFD/Panel (preference)	• frequency inverter
• VFD / other type	• frequency inverter (third party)
• star-delta switch	• fan start/stop
Fire safety solutions:	SHIELD
• ShieldControl	• fire detection panel
• Sliding valves	• pneumatic shut-off sliding dampers
• 3/2 solenoid valve	• release valve
Options and accessories	
Panel to HMI cable 60 m	instead of standard 15 / 30 m
LightTower	
PT-1000 or PT-2500	external pressure transmitter
Dustbin level indicator	switch or sensor (future development)

Scope of supply
ControlPro forms an integral part of the filter systems MDB PRO, SCS PRO and EDS PRO



ControlPro/Panel

Panel (control panel) | Double-bit key | Mounting bracket (4), incl. mounting material | Pneumatic hoses (for filter & fan pressure), incl. mounting material | Installation manual | Electrical diagram | UL compliance sticker

ControlPro/HMI

HMI, incl. bracket and locking screw | Ethernet field connector (IP 67)

Connection cables: Panel → HMI cable*), incl. heat shrinking tubes | Panel → SlaveBoard cable, incl. cable gland, termination plug and heat shrinking tubes | SlaveBoard → SlaveBoard cable, incl. cable glands

*) MDB-4 PRO to MDB-24 PRO: 15 m (49 ft.) | > MDB-24 PRO: 30 m (98 ft.) (option: Panel to HMI cable 60 m / 197 ft.)

Control/SlaveBoard

Integrated on MDB

Installation distances

Filter system to Panel	max. 10 m (32.8 ft.)
Panel to HMI	max. 60 m (197 ft.)

Order information

ControlPro forms an integral part of the filter systems
MDB PRO, SCS PRO and EDS PRO

FEATURES & BENEFITS

- Simple**

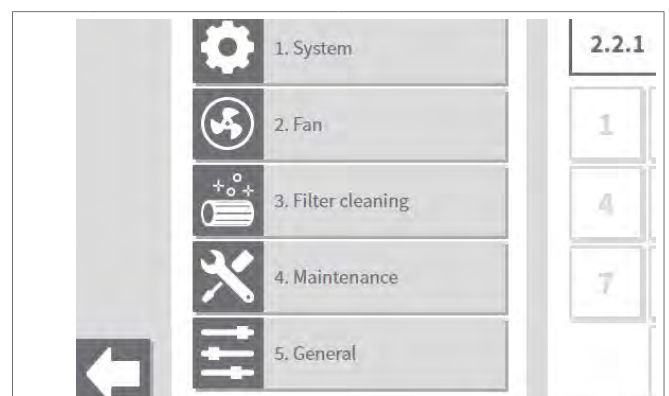
 - Simple installation, configuration and operation
 - Fully automatic operation (due to weektimer and automatic progressive filter cleaning)
 - Intuitive settings menu
- Insight**

 - ... in what the system is doing *now*
 - ... in what the system is doing *next*
 - ... in the overall system performance
- Connected**

 - Online support
 - Centralized control for multiple systems
 - Control from any mobile device



HMI with intuitive touch screen



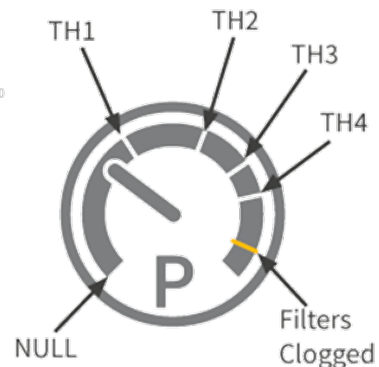
Clear and easy accessible menu structure



Preferred fan control equipment: VFD/Panel

- Allows for full communication between Panel and HMI
- Main switch to de-energize the entire filter system, thus complying with CE safety requirements

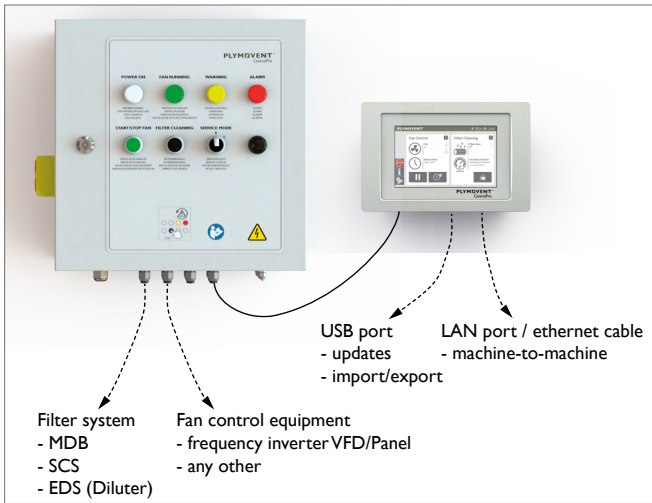
Frequency inverter VFD/Panel



Threshold value	Pressure	Offline cycles	Delay	Online cycles
MDB PRO				
1	800 Pa	2	4 h	4
2	1000 Pa	4	2 h	8
3	1200 Pa	5	1 h	12
4	1400 Pa	continuous filter cleaning		
	1300 Pa	pressure fallback		
	1600 Pa	filters clogged		
SCS PRO and EDS PRO				
1	1000 Pa	1	4 h	2
2	1200 Pa	2	2 h	4
3	1400 Pa	3	1 h	6
4	1600 Pa	continuous filter cleaning		
	1500 Pa	pressure fallback		
	2000 Pa	filters clogged		

Automatic progressive filter cleaning (adjustable) for a longer filter life and lower operational costs

COMMUNICATION



Product type	ControlPro
Article no.	n/a
Product category	control equipment
Version	050917/B

Always check the latest version on www.plymovent.com