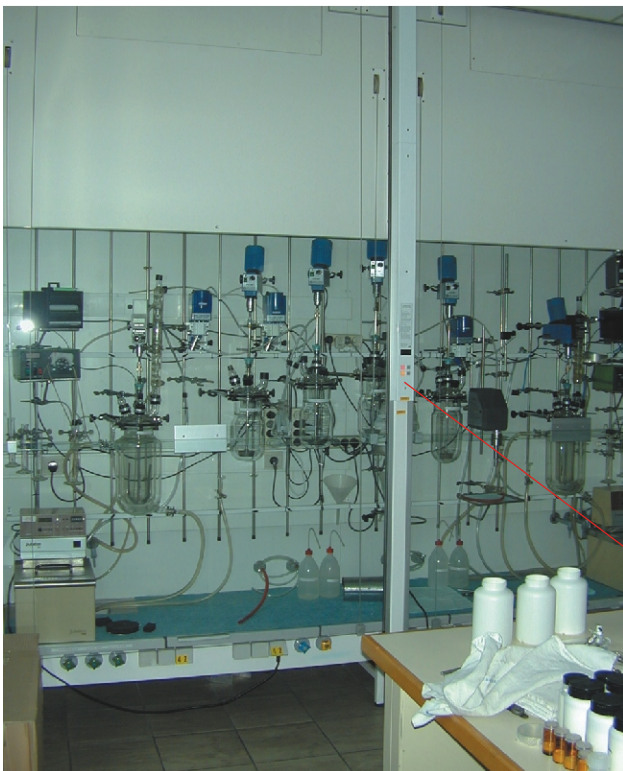


DPC300 FUME CUPBOARD CONTROLLER

- Ultra low face velocity measurement
- Millisecond response time
- Excellent repeatability
- Total shut off and allround airtight
- Pressure independent from 5..750Pa
- Long term velocity measurement stability
- Ultra low hysteresis
- Extract Volume Venturi Tracking Sensor
- LCD with Alarms and Emergency Exhaust
- Transducer and PCB is made by CMR
- After Sales Service is provided by CMR
- 24 month warranty
- 20 Years field application experience

The CMR Fume Cupboard Face Velocity controller maintains 0.50 m/s linear face velocity at all times regardless of the sash type, vertical or horizontal. This means the sash can be closed down to 10mm or opened to 500mm and the face velocity will remain at 0.50 m/s. The set point is user adjustable from 0.35 to 1.00 m/s. All alarm levels can be adjusted and remote mute, total shut off, hand position can be connected to the BMS. An emergency exhaust panic button is standard in case of chemical spillage to provide user safety. The DPC300 can be supplied in 24, 110 and 230VAC and is delivered ready as a kit to be installed by anybody. The CMR PPS Valves are airtight and the venturi tracking sensor provides exhaust volume measurement for the CMR make up air controller. The Valves are supplied in sizes 100, 160, 200,250,315 and 400 mm diametre with or without venturi and flanges.



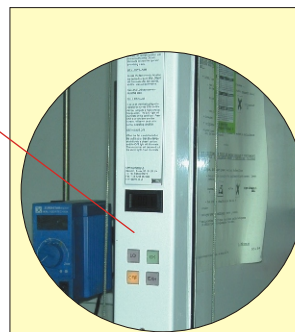
A typical fume cupboard in a chemical laboratory. The large sash is almost a walk in cupboard. CMR controls the extract volume to provide safety for the operator and energy saving.



The CMR DPC300 Fume Cupboard Controller is complete with face velocity indicator, valve position indicator, manual / auto control, alarm function, panic emergency exhaust and any BMS can be connected for remote functions.



CMR PPS Valve is manufactured to high quality standards and is airtight throughout. A venturi extract volume measurement device is built in. The AST16 heavy duty motor was especially designed for Fume Cupboard extracts and moves in 2.5 seconds from closed to fully open if required and has milliseconds response time.



CMR manufactures alarm fascia plates, channels or enclosures to suit the clients environment and aesthetics. The LCD display shows the actual face velocity in m/s. Functions and indications:
Green healthy led all safe.
Red flow alarm.
Yellow sash alarm or off.
Buzzer with mute.
Red Panic emergency exhaust button for total user safety.

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DPC300 FUME EXTRACT FUNCTION

DPC FUME CUPBOARD CONTROLLER

GENERAL

The DPC Fume Cupboard controller is compact and fully pre-tested and ready for installation. The standard system consists of a PPS extract valve without venturi volume measurement and is driven by the VMS30 motor which is perfect for most of the fume cupboard control applications. The DPC300 Controller is boxed and ready for connections. The motor, remote display plate and the sash high proximity sensor is factory pre-wired and can just be plugged into the DPC. The bulkheads and tubing for the face velocity sensing can either be installed by the Fume Cupboard Maker or it can be installed on site. The wiring diagrams and Installation Instructions are provided and the DPC can also be field wired if the plug-in system is not suitable.

CMR FACE VELOCITY SENSOR

The CMR Sash face velocity Sensor is a unique electronic velocity measuring device which works on the principle of differential pressure measurement between inside the Fume Cupboard and the Laboratory. It is built into the DPC-Controller and only standard CMR PVC tubing and bulkheads need to be installed either by the Fume Cupboard maker or on site.

The negative suction within the Fume Cupboard pulls a sample of the air through the CMR Precision Sensor via a sampling point on the top front face of the Fume Cupboard. The air, which is drawn from the clean Laboratory air is filtered by a special CMR Air Cleaner which is totally maintenance free and has proven itself for over 12 years in this environment. The sensing element heats the sampled air to 160° C and by means of differential temperature measurement the face velocity is determined and scaled. Micron dust particles will be burnt off and therefore the sensor shall never be contaminated.

The CMR Sensor is temperature compensated and linearized to provide an output signal which represents the front face velocity of the sash. The linearity is proven to be accurate at any sash height up to 500mm. In fact the CMR sensor is linear over a range of 0.35 to 1.00 m/s over any sash height between 10mm and 500mm.

The installation is extremely easy and can be done on site on any Fume Cupboard Make. The velocity sensor is designed for Fume Cupboards which have extract volume control and must not have face by pass top inlet grilles. In fact, for maximum energy saving it is essential that the Fume Cupboard is well sealed between the Glass front and the top compartment of the Fume Cupboard. The very top of the Fume Cupboard must be sealed so that the negative pressure of the laboratory can be kept stable.

The sampling points shall be installed by drilling and fitting a CMR Bulkhead either into the top inside ceiling or both inner side walls of the Fume Cupboard. An equal length of blue PVC tubing is connected to either Bulkhead and connected to the negative port of the DPC. CMR shall advise on the placement of the bulkheads in case of special applications

A Bulkhead shall be fitted to the top front face of the Fume Cupboard to measure the laboratory pressure. Red PVC tubing shall be fitted from the bulkhead to the DPC controller.

PPS, GALVANISED EPOXY COATED OR STAINLESS VALVES

The CMR Fume Extract Valve is normally made of PPS (Polypropelene) and is circular. It has a Venturi Flow Measurement device built in. The valve can also be manufactured in galvanised steel and epoxy coated or stainless steel to suit many applications. The motor is factory fitted to the valve and fully tested and ready for installation. All Valves can be manufactured with or without venturi volume measurement and Flange connections. The sizes available are 100, 160, 200, 250, 315 and 400mm diameter.

PPS OR STEEL VENTURI VOLUME MEASUREMENT

The valves with venturi extract volume measurement are used for larger applications where each Fume Cupboard provides an extract volume which is added up to control the make up air. All CMR valves are airtight to DIN standard 24147 T1. The VMS or AST range of motors are able to drive the valve to a total shut position, which is of great advantage in case of maintenance or isolation work to be carried out. All CMR Valves work over the full range of back pressures even as low as 5 Pa and up to 750 Pa. The Valve is totally pressure independent and shall adjust to provide a constant face velocity at fluctuating extract pressure. The Valve sizes should be selected to provide a minimum velocity preferably above 3.0 m/s in the extract duct at minimum sash height to be able to read the extract volume accurately if this volume is to be used to control the make up air.

VMS AND AST MOTORS

The VMS motors are economy actuators and are supplied on valves up to 315mm. They are normally fitted to PPS valves with 4NM and are the most popular motors for the DP300 Controllers.

The AST motors are compact and designed to IP65 to operate in harsh environments. The Gear Box is a cast alloy with an ABS enclosure complete with seals. The gears are permanently embedded in special heavy duty grease for long term duty.

The synchronous AC motor runs at 300 r.p.m providing high speed and high torque on the output shaft. The electric motor cannot be overloaded and can be halted at any point without overloading the electronics which means the motor is highly durable in this harsh environment over many years. Adjustable limit switches are provided for limiting the travel of the motor from beginning to end to suit the application. Additional limit switches are fitted for alarming or other control functions. A manual handle is provided to position the Valve to any position in case of emergency maintenance shut down. An indication dial of the actual position of the Valve is fitted as standard to view the adjustment angle. The AST actuators are made in various speeds i.e AST16-4s-2.5NM or AST21-15s-10NM.

DPC300 CONTROLLER

The Power Supply can be 24, 110 or 230V 50Hz and shall be fitted with a plug and cable to suit the UK or Continental Europe. The power can also be connected to terminals inside the controller. All fuses and power supplies to operate the controller, motor and display plate are incorporated within the controller. The controllers front control panel is protected by a clear window which can be fitted with a key lock to prevent unauthorised access. An LCD display indicates the actual face velocity in m/s. A set point dial is fitted to adjust the face velocity from 0.. 100% (0... 2.00m/s).

A second LCD display indicates the position angle of the motor in %. 0% is closed and 100% is fully open. A Hand/Auto switch is fitted and when selecting the Hand position the valve can be opened or closed via a set point dial on the controller. This is ideal for maintenance or other shut down purposes. A low and high alarm threshold set point dial can be adjusted. A built in timer times out the low or high alarm and switches on a red LED on the DPC300. A latching mute button is fitted to mute the alarm either momentary or permanently.

REMOTE DISPLAY OPERATOR PANEL

The buzzer and all functions are built into the remote alarm display plate and can be fitted on the fume cupboard front. Custom made designs to suit the clients fume cupboards are available from CMR.

SASH HIGH PROXIMITY SENSOR

The sash high proximity sensor is easily mounted in the top of the fume cupboard and can be plugged into the DPC. The sash glass shall be fitted with an aluminium foil to provide the high alarm.

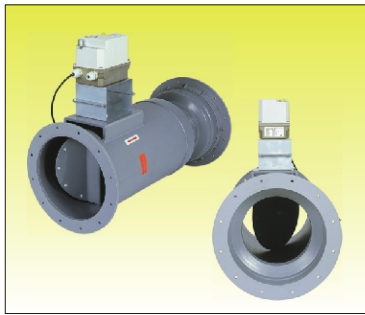
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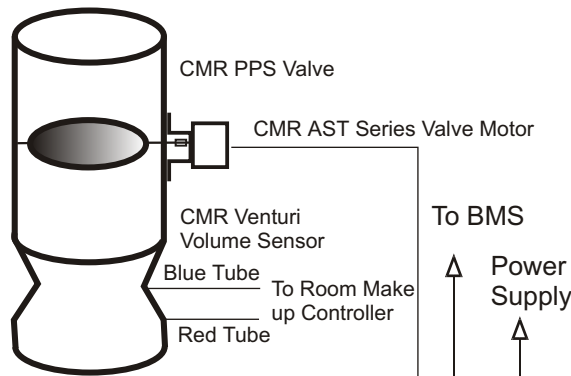
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DPC300 FUME CUPBOARD SCHEMATIC



PPS air valve with venturi volume measurement, flanges and 4s motor



PPS air valve with VMS30 motor without venturi extract volume measurement.



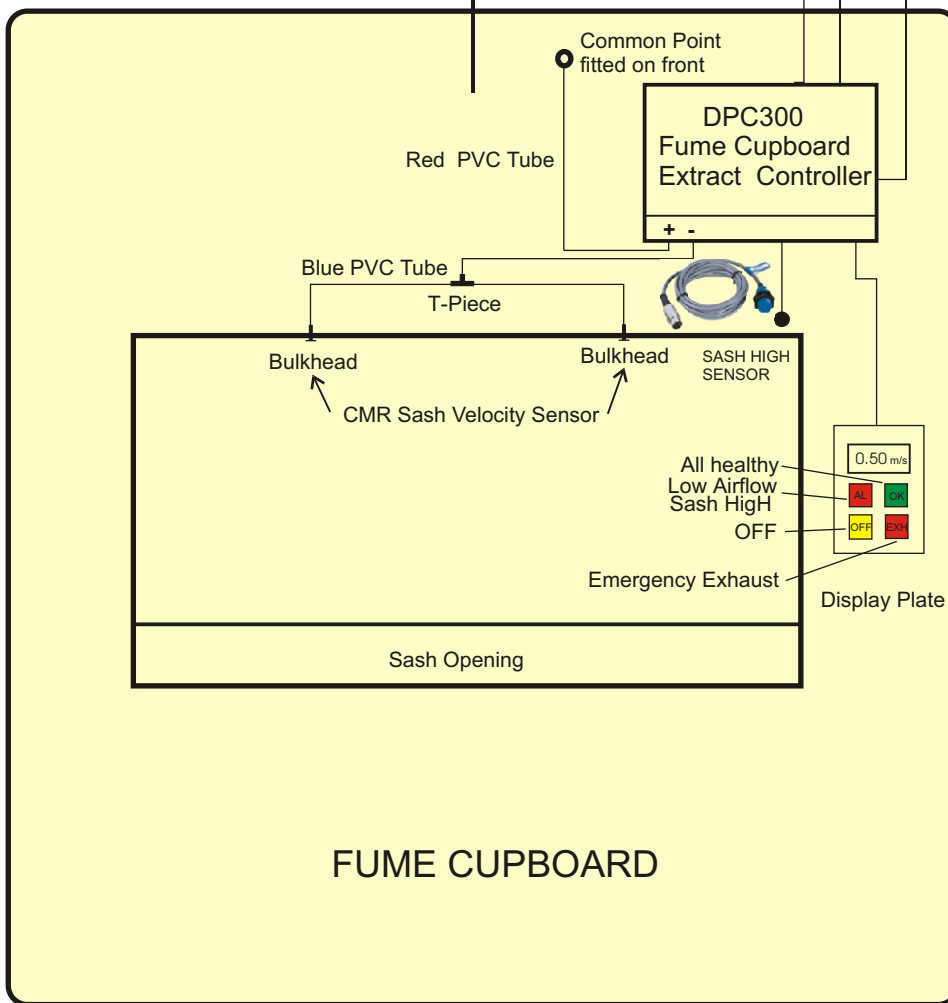
Galvanised air valve with AST15 4s motor and venturi volume measurement



VMS30 valve actuator with plug ready to connect to the DPC300 controller.



LCD display plate with low and high flow and sash high alarm, emergency exhaust panic button and shut off.



The above schematic shows a detailed installation of the DPC300 fume cupboard extract controller. The extract valves can be supplied with or without Flanges, with or without Venturi and with AST fast acting heavy duty motors or VSM economy motors normally used in less critical applications. The response time is always milliseconds. Alternatively, galvanised or stainless steel valves can be supplied with or without venturi. Powder coating is also available to users requirements.

A proximity sash high sensor can be supplied, and the AL button on the display plate would become the Sash Hi Alarm as well as the Flow low or high alarm. By pressing the AL button the buzzer can be muted. When pressing the yellow indicator OFF button it would illuminate and shut the damper and mute the alarm. The DPC300 can receive a volt free contact to shut the damper and a contact to mute the alarm. The EXH button activates the emergency exhaust and the set point is set to an adjustable face velocity i.e. 1.00m/s.

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DPC300 USER OPERATOR PANELS

DPC FUME CUPBOARD CONTROLLER FRONT SWITCH PLATE

CONTROL VALUE LCD

This LCD display indicates the actual Face Velocity across the sash of the fume cupboard.

CONTROL SET POINT

The control set point of the face velocity is normally set to 25% which is 0.50m/s. 100% would be 2.00m/s.

LOW ALARM

The low alarm set point can be set to 0 - 100% of the 0..2.00 m/s sensor range. If it is set to 10% it will alarm at 0.20m/s. The internal timer is factory set to 30s, which means the alarm buzzer and light switches on after 30 seconds of the air flow being lower than 0.20m/s.

HIGH ALARM

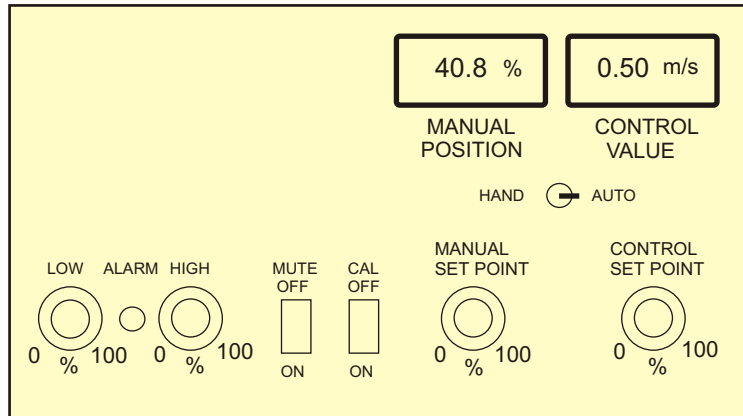
The high alarm set point can be set to 0 - 100% of the 0..2.00 m/s sensor range. If it is set to 50 % it will alarm at 1.00 m/s. The internal timer has been set to 30s, which means the alarm buzzer and light switches on after 30 seconds of the air flow being higher than 1.00m/s.

MUTE ON - OFF

The mute button can be switched to ON to mute the alarm permanently and the buzzer shall never come on. If the mute switch is in OFF position then the buzzer shall switch on after the time out of any alarm. This feature is ideal for the operators to choose their own criteria.

CAL ON - OFF

If the CAL is switched to ON the valve motor stops operating and the damper position is locked in the last position. The tubes can now be removed from the velocity sensor and calibration work can be carried out safely.



HAND - AUTO

The hand/auto switch must normally be in auto position which means the controller works in automatic mode controlling the valve motor on face velocity. If the switch is set to hand position, the valve motor can be positioned with the manual set point to any position from fully closed at 0% to fully open at 100%.

MANUAL POSITION LCD

The LCD display indicates the position of the valve motor. If the indication is approximately 0% then the valve is closed. If the indication is approximately 100% the valve is fully open.

MANUAL SET POINT

The manual set point is the positioner for the valve. If the potentiometer is set to 50% the valve drives to 45° open. If set to 0% the valve drives to closed or 0% open.

REMOTE FUME CUPBOARD DISPLAY AND ALARM CONTROLS

AL = LOW FLOW

The red Low Flow Alarm Light shall come on in case the air flow is lower than the alarm set point. The buzzer shall come on as well if not permanently muted on the Controller mute switch. When pressing the red AL button the buzzer can be muted and also reset if the alarm has been set to latching.

SASH HIGH

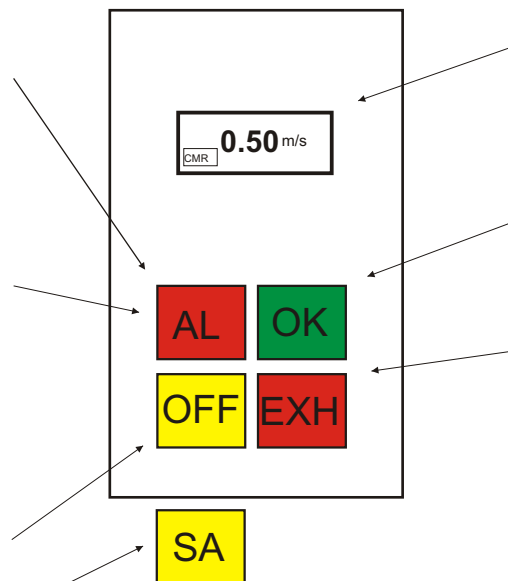
If the sash high proximity switch is fitted then the red AL light would be used for the sash high alarm and the low or high Flow alarm would work in parallel. By pressing the AL button the alarm can be muted.

OFF = VALVE SHUT

When the OFF button is pressed it shall switch on the yellow LED and set the valve to shut position. It shall also mute the alarm buzzer. If the EXH button is pressed, it overrides the OFF button and drives the damper to its pre-set opening.

SASH HIGH

If only sash and not OFF is used the OFF becomes SA.



LCD DISPLAY

The LCD display indicates the actual face velocity on the sash. The indicator is duplicated from the DPC controller Actual Velocity indicator and is scaled in m/s. The display is slower to indicate than the control action as dampening is switched in on the rear of the LCD.

OK = ALL HEALTHY

The green OK light comes on when there is no low or high flow alarm.

EXH = EXHAUST

When pressing the EXH panic button, the red EXH light comes on and the airflow shall increase to a pre-adjusted set point up to 2.00m/s to provide an emergency extract in case of chemical spillages in the fume cupboard. The set point can be adjusted on a potentiometer on the rear of the push button electronic.

When pressing the EXH button again the red light EXH will switch off and the air flow reverts back to its original set point as set on the front of the controller.

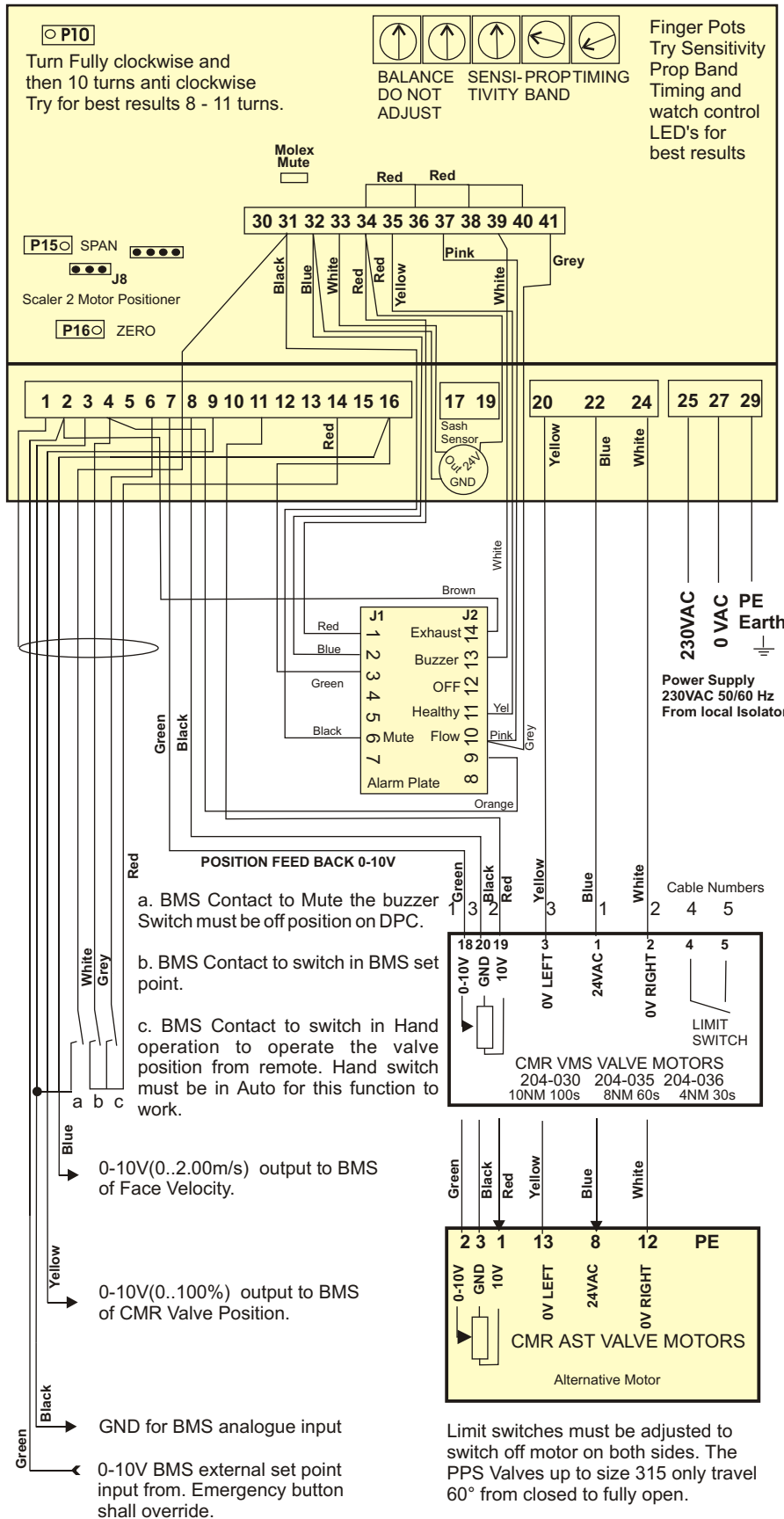
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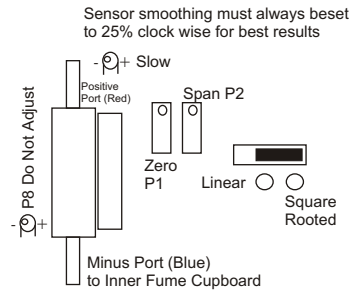
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DPC300 WIRING AND COMMISSIONING



FC201 Velocity Sensor PCB



Zero and Span Adjustments

To adjust the zero of the velocity sensor switch CAL to ON, remove all tubes and block off the red nipple. Switch the Slide switch to the left position, which is linear mode. Use a voltmeter on terminal 15(-) and 16(+) and watch the velocity LCD as well. Use a small screw driver and adjust the zero potentiometer P1 on the FC201 card until 0.00V is indicated or 0.00 m/s.

To adjust the span, put the slide switch back to square root and re connect all tubes. Switch the CAL switch to OFF. Adjust the set point to 25% i.e. 0.50m/s.

Use a calibrated reference velocity measuring instrument and scan the sash opening of 500mm. Take an average on the front sash face and if the velocity is lower than the LCD display turn the span potentiometer P2 on the FC201 card anti clockwise until the LCD and Test Instrument indicates the correct velocity of 0.50m/s. If the Test Instrument indicates higher velocity than the LCD, turn the span pot P2 clockwise until the LCD and Test indicates 0.50m/s.

Repeat zero and span adjustments a few times until satisfied. Always make sure the slide switch is in square root mode and the CAL switch to OFF when finished.

SW1 SETTING

- 1 n/a
- 2 n/a
- 3 n/a

Timer Function

- 4 off - 5 off 0s Alarm Delay
- 4 off 5 on 10s Alarm Delay
- 4 on 5 off 30s Alarm Delay
- 4 on 5 on 60s Alarm Delay

- 6 On=Latching Alarm
- 7 On=Re-Alarm Timer set
- 8 On=High Sash Alarm Relay
- Off=Sash Alarm Output

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DPC300 ORDER DESCRIPTION

DPC300 FUME CUPBOARD CONTROLLER

GENERAL

CMR manufactures a specialist DPC300 wall or panel mount fume cupboard face velocity controller to suit many applications. Because of the variety of control outputs and power supplies it has been necessary to design an easy to use selection table for anybody to make up a DPC300 controller specification to satisfy a requirement. You will find all specifications available with the associated ordering Code on the DPC300 Controller Selection Table (Page 7) . In order to select the correct part we have made up a sample selection below:

DPC300 PART NUMBER

The DPC300 Part Number starts with the selection of the controller type of enclosure without Lid, with Lid or with Lid and key lock and the ABS box is fitted with glands for internal cable connections. DPC300 enclosure without Lid has the Code '70A'. DPC300 enclosure with Lid has the Code '70B'. DPC300 enclosure with Lid and key lock has the Code '70C'.

The ABS box is fitted with sockets to quick connect the external motor, proximity sash high switch and alarm plate. DPC300 enclosure without Lid has the Code '70D'. DPC300 enclosure with Lid has the Code '70E'. DPC300 enclosure with Lid and key lock has the Code '70F'.

As an example, we have chosen the Code 'B'. The Part Number starts therefore with '70B'.

NEGATIVE VELOCITY RANGE

The DPC300 is never controlling in a negative velocity range and therefore the Code is always '000'. The Part Number extends to '70B 000'.

POSITIVE VELOCITY RANGE

The DPC300 is always supplied with an internal low air flow velocity sensor and only the scaling is different. We have used a range of 2.00m/s which has the Code '015'. The Part Number extends to '70B 000 015'.

OPERATOR FRONT PANEL

The operator panel is an anodized aluminium panel which is standard as shown on page 4. The choice of plate is expressed as plate type 'A' and has all functions. The order Code is 'A'. If the Front panel is to be plain without any controls than the Code is 'K'.

Other types are available. Please consult CMR. In the example we have chosen Type 'A'. The Part Number extends to '70B 000 015 A'.

POWER SUPPLY

The DPC300 can be ordered in 24VAC with Code '3' 110VAC with Code '4' 230VAC with Code '5' 240V UK complete with cable and UK plug with Code '6' 240V EU complete with cable and European plug with Code '7'.

All cables are 1.5m long. We have chosen 240V with cable and UK plug which has Code '6'. The Part Number extends to '70B 000 015 A 6'.

CONTROL MODE

The control mode is always the same with fume cupboards. The valve opens when there is no extract air flow. The code is 'A'. We have chosen Mode 'A'. The Part Number extends to '70B 000 015 A 6 A'.

CONTROL OUTPUT

The Control output for CMR valve motors are open-off-close. The DPC300 has a triac output to drive the synchronous motor open-off-close. The output is generated by the isolation transformer built into the DPC, which means the output is named 24VAC I which means Internal power for the motor. The code is 'C'. This means no matter what the power supply is i.e. 24VAC, 110VAC or 230VAC by choosing code 'C' the control output is always 24VAC (internal) but it is limited to 350mA. If the ABS box is fitted with a socket then the motor is fitted with a cable and plug.

It is advisable to mention what type of equipment shall be driven by the DPC300 controller during order stage in order to make sure the control output is capable to drive the actuator used.

We have chosen 24VAC I as output which has the code 'C'. The Part Number extends to '70B 000 015 A 6 A C'.

SCALED UNITS

The set point dials and manual LCD are always scaled in % and cannot be scaled unless a special front plate is made. The 3 1/2 digit actual velocity LCD is factory scaled to 0..2.00m/s which has the code '1'.

The sensor LCD can be calibrated in other engineering units and full details of range must be specified during order stage. Please consult CMR.

In the example we have chosen the Code '1'. The Part Number extends to '70B 000 015 A 6 A C 1'.

DECIMAL PLACES

The 3 1/2 digit LCD can only display 1999 or 199.9 or 19.99 or 1.999 all depending on the decimal place setting. Code 'A' displays 000 Code 'B' displays 00.0 Code 'C' displays 0.00 Code 'D' displays .000 We have chosen the standard DPC300 setting code 'C'. The Part Number extends to '70B 000 015 A 6 A C 1 C'.

ALARM FUNCTION

The DPC300 is supplied with an alarm threshold output board. The board has a low/high alarm relay and a buzzer relay. A low and high threshold set point adjuster is on the front of the control panel. If the sensor signal is below or above the threshold, a timer can be programmed to switch on the alarm and buzzer relay. The buzzer can be muted. A remote alarm display plate can be supplied which can be hard wired or if the ABS Box is fitted with a socket, the Alarm Plate can be plugged into the DPC.

If the remote alarm display plate is not required the Code shall be '0' for 'NONE'.

If the sash high alarm and not the off function is required then the order Code is '1' for 'Sash'.

If the off function is required and not the sash high then the order Code is '2' for 'Off'.

If the sash high alarm and off is required then the sash alarm and flow alarm is on the AL light and the OFF light and switch is used.

The order Code is '3' for 'S/O'.

In the example we have chosen Code '1'.

The Part Number extends to '70B 000 015 A 6 A C 1 C 1'.

FINAL PART NUMBER

The Part Number to order is '70B 000 015 A 6 A C 1 C 1'.

Now try and select your own DPC300 using the DPC300 Order

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DPC300 ORDER SELECTION TABLE

THE SELECTION TABLE IS FOR A DPC300 FUME CUPBOARD CONTROLLER

The selection Table has been prepared to make ordering easy. Each Column contains a number of different options which are available and a Part Number can be established by yourself depending on your specific requirements.
 The Example Part Number 70B 000 015 A 6 A C 1 C 1 which is printed above the Selection Table and can be identified as being a DPC300 Fume Cupboard Controller.

The controller has a Lid and a built-in low velocity sensor. The negative velocity is not used and the positive range is 2.00m/s. The front plate is fully populated Type 'A' with 0...100% sensor set point dial. The power supply is 230VAC with cable and UK plug. The control mode 'A' drives the damper open when there is no air flow. The control output is 24VAC internal for hard wire . The LCD is scaled to m/s with two decimal places. The alarm has sash high.

EXAMPLE PART NUMBER SELECTION (The code after the (=) sign is used i.e. with Lid = 70B)

70B	000	015	A	6	A	C	1	C	1
DP300	Negative	Positive	Front	Power	Control	Control	Scaled	Decimal	Alarm
Part No.	Range	Range	Plate	Supply	Mode	output	Units	Places	Plate
No Lid = 70A	N/A = 000	1.00 m/s = 010	A	24 VAC = 3	Mode = A	24VACI= C	None=N	N/A = N	NON =0
With Lid = 70B		2.00 m/s = 015	K	110 VAC = 4			m/s = 1	000 = A	Sash=1
With Key= 70C		3.00 m/s = 020		230 VAC = 5				00.0 = B	OFF=2
		4.00 m/s = 025		230 V UK= 6				0.00 = C	S/O=3
With Plugs				230 V EU =7				.000 = D	
No Lid = 70D									
With Lid = 70E									
With Key= 70F									

HOW TO ORDER

Make up your own DPC300 Fume Cupboard Controller selection below using the empty cells

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EXAMPLE

A wall mount Fume Cupboard Controller is required of the type DPC300
 The DPC300 shall have a Lid with a key lock and cable sockets
 The DPC300 will be used with an internal low velocity sensor
 The negative velocity range is not used
 The positive velocity range must be 1.00m/s
 The front plate must have two dial set points for hand/auto with two LCDs and Alarms
 The power supply must be 230VAC and has a cable with a european plug
 The control mode shall be open damper at no air flow
 The control output must be 24VAC and the motor has a cable and plug
 The scaled units must be in m/s
 The indication must be m/s with two decimal places
 The remote alarm display plate has Sash High and OFF function

Call CMR for assistance at any time

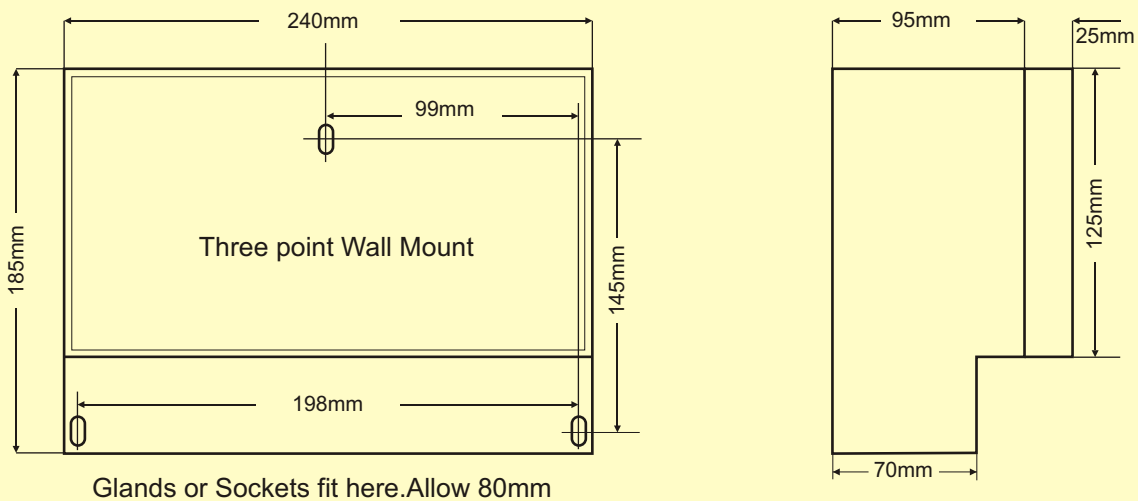
The part Number for this DPC300 is **70F 000 010 A 7 A C 1 C 3**

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DPC300 TECHNICAL SPECIFICATION

Measurement Range	See Order Selection Table DPC300
Optional Range	Any Range from 1.00m/s to 4.00m/s
Overload Capacity	To 340mBar
Media	Non Corrosive Gases such as Air,N ₂ ,O ₂ ,CO ₂ ,N ₂ O, inert Gases
Sensor Type	Air Velocity or Mass flow see CMR F-Sensor technical data sheet.
AC Power Supplies	24 VAC 50/60Hz Fuse 1.0 A Wickmann
	110VAC 50/60Hz Fuse 315 mA Wickmann
	230VAC 50/60Hz Fuse 315 mA Wickmann
AC Control Output	24 VAC I (internal power from isolation transformer) max 350mA (Fused 1A Wickmann)
	24VAC (1A), 110VAC (200mA), 230VAC (100mA) output bridged directly to Input Terminals. Fused
DC Control Output	Consult CMR for different DPC Controller
Sensor Output Voltage RL = 5kOhm min	0-10V (0...100% of Range) in square root mode - Scaler 1 can be connected
	The output voltage is the result of square rooting the linear output.
Hysteresis/Repeatability	0.5% Typical of Full Scale
Linearity (Accuracy)	2.5% of Full Scale in square root mode
Zero Drift	0.05%K (+10°C to +50°C)
Hand - Auto switch	Digital input on T4 external set point switch T6 change over from auto to hand min. 0.8V to 31V
External Set Point	0...10V on T2 - scaler2 can be connected
Position Input	0...10V on T7 - scaler 2 can be connected
Alarm Threshold Voltage	0...10V on low and high alarm set point.
Control Function	Off-Set - Sensitivity - Proportional Band - Timing / Integral - Ramp Speed - output Freeze
Alarm Relays	1A 24VDC / AC Low/High Alarm single pole change over - Buzzer and repeater single pole on-off.
Operating Temperature	+10°C to +40°C (Storage -40°C to +70°C)
Mounting Position	Vertical
Weight	1.2 kg
Electrical Connections	4 x PG13 1 x PG11 Gland Internal Plugs with Screw Connections or plug and sockets.
Air Tube Connections	Positive and Negative Pressure Barbed Nipple 6.5mm O/D x 15mm long standard for CMR PVC tube
Enclosure	ABS Grey with clear front Lid lockable with key Protection Class IP65. Without Lid IP44
Conformity	EN61326-1 EMC EN61010-1 SAFETY
Calibration Certificate	CMR can site calibrate and issue a Certificate traceable to National Standards

ENCLOSURE DIMENSIONS



CMR CONTROLS
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