

**Air Pressure and  
Volume Controller**

**DR-FPC**

**DR-FP1P10.R**

## ►DR-FPC

### Pressure and Volume Controller for Air and Non-Corrosive Gases.



- Pressure and Volume Control
- Roof Shot Fan Pressure Control
- Stair and Elevator Fan Pressure Control
- Damper Volume Control
- Filter Pollution Control
- Sensor and Controller Modes
- EC and AC Fan Control
- Working with 220V AC supply
- Internal Time Clock
- RS485 Modbus
- CMOSens® Technology

#### General Information

Measuring Range	Measuring Resolution	Accuracy Range	Strength Pressure	Working Temperature	Protection
-500Pa ~ +500Pa	16Bit	±3%	100kPa	-40°C ~ 85°C	IP54

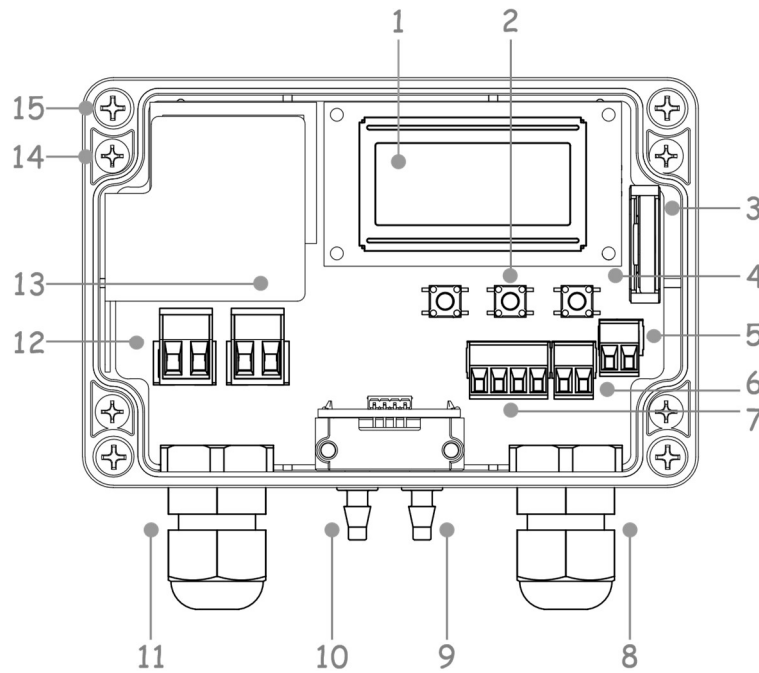
#### Technical Data

Electrical Features	Supply	220VAC 50/60Hz
	Consumption	<1.0VA
Functional Features	Application	Air and Non-Corrosive Gases
	Time Clock	Internal RTC and Battery
	Communication	Modbus RTU (Optional)
	Outputs	1 Analog Out O3 0-10V / 8Bit / Max. 15mA 1 Digital Out O1 Max. 30VDC / Max. 30mA / Open Collector 1 AC Fan Power Output O2 220VAC / Max. 1.2KW
	Inputs	1 Dry Contact Input I2 1 Universal Input I1 0-10V / NTC10K / Dry Contact 1 Digital Out O1
	User Interface	LCD 8x2 Text and 3 Menu Buttons
Air Connector	Low/High Pressure Prob Suitable for using 4x6mm silicone hose	

#### Purchase Code

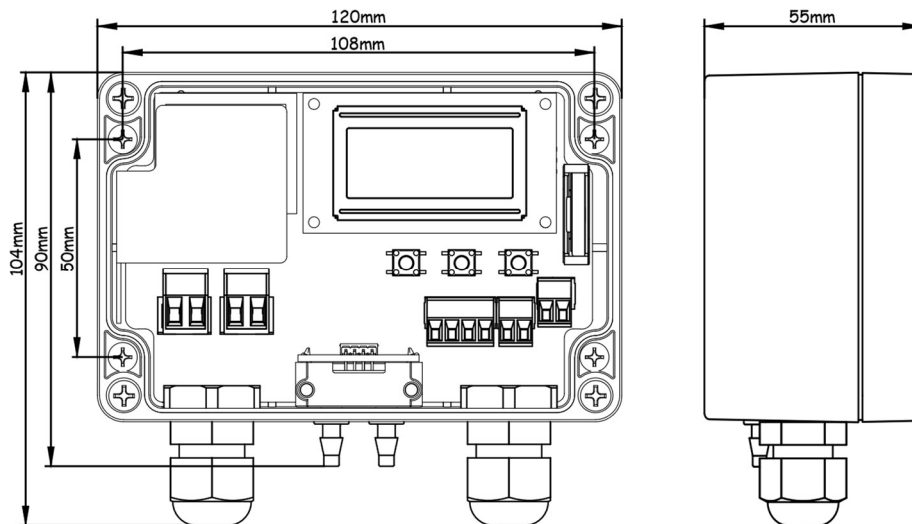
Type		Device	Control	Phase	Model		Optional
XX	-	X	X	XX	XX	.	X
DR: Driver		F: Fan	P: Pressure	1P: 1 Phase	10: PCB Model		R: RS485 Modbus

Overview



1	LCD Display	6	Analog Output Terminal	11	Power Cable Coupling
2	Menu Buttons	7	Digital IO Terminal	12	Main Power Terminal
3	Time Clock Battery	8	IO Cable Coupling	13	Fan Power Terminal
4	State Led	9	Low Pressure Probe	14	Box Mounting Screw
5	MODBUS Terminal	10	High Pressure Probe	15	Cover Mounting Screw

Size



Boxing and Delivery

Box	Dimensions	12cm x 11cm x 6cm	Parcel	Dimensions	31cm x 24cm x 16cm
	Weight	325gr		Box Qty.	20 pcs
			Pallet	Dimensions	80cm x 120cm x 87cm
				Parcel Qty.	27 pcs

## Terminal Informations

Terminal No	Function Label	Function Info	Electrical Info
1	N	Power Inputs	220VAC 50/60Hz
2	L		
3	TO1	Fan Power Out	80-220VAC <1.2kW
4	L		
5	DO2	Digital Out	Open Collector 30VDC <30mA
6	DI1	Digital Input	Dry Contact Input
7	UI2	Universal Input	Dry-0-10V-NTC Input
8	DGND	Common	Digital Ground
9	AO3	Analaog Output	0-10V Oupput
10	AGND	Common	Analog Graound
11	B	Modbus RTU	RS485 up to 128 device
12	A		

## Working Modes

Device has three different working mode by Constant, Proportion and Sensor Mode.

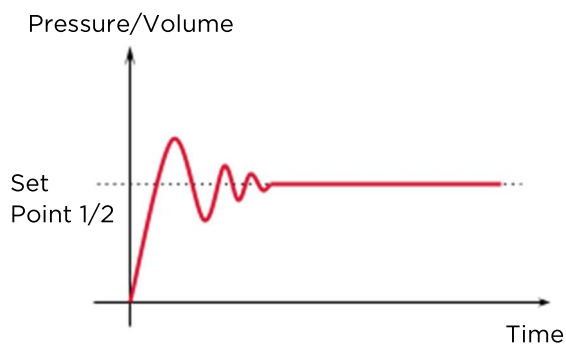
Working modes can set in the "WMode" option in the Main Menu.

Device behavior according working modes:

### Constant Working Mode

This mode use for stable pressure or volume control.

It controls the fan using PID algorithm.

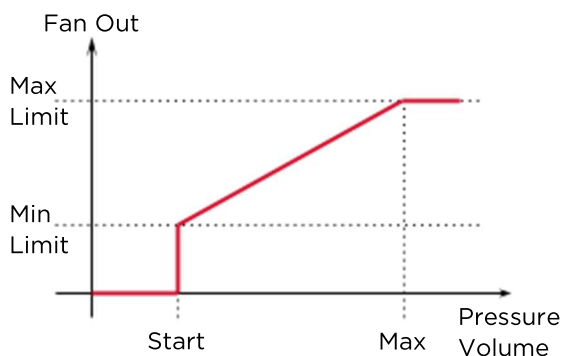


### Proportion Working Mode

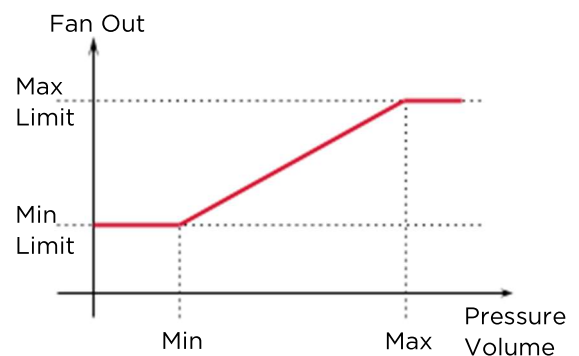
This mode use for proportion fan control.

There are two types.

- Start to Max



- Min to Max



### Sensor Working Mode

It is the sensor operating mode where the differential pressure value measured from +/- probes is transferred to analog output as 0-10V. The pressure value measured from the sensor can be transferred to the analog output in 3 different frequencies as Differential, Positive and Negative.

Analog output scale setting is setted from the

"AOut" option on the sensor screen. The resolution of the measurement scale is 8 Bit.

Sensor (Pa)	Analog Out Scale		
	Differentia	Positive	Negative
+500 Pa	10V	10V	0V
0 Pa	5V	0V	0V
-500 Pa	0V	0V	10V

## Menu Buttons



- **OK Short Press:**
  - \* Enters the option that appears on the screen.
  - \* It allows switching between the data entered in the setting screens.
- **OK Long Press:**
  - \* If in the menu, it returns to the previous screen.
  - \* If there is a change in the set entered in the setting screen, it saves the set and quits. If set not changed returned previous screen.
- **UP Short Press:**
  - \* While in the menu, it allows upwards among the options.
  - \* Allows the value to be decreased while on the setting screens.
- **UP Long Press:**
  - \* It allows the value to be increased rapidly while on the setting screens.
- **DOWN Short Press:**
  - \* It allows down through the options while in the menu.
  - \* Allows the value to be decreased while on the setting screens.
- **DOWN Long Press:**
  - \* It allows the value to be decreased rapidly while on the setting screens.

## Menu Table Overview

Main Menu	Sub Menu	Settings	Default	Limits
Set Wmode	-	Constant		Constant Proport. Sensor
Set Constant	Set P1	30Pa		.-500Pa +500Pa
	Set P2	30Pa		
	Alarm	State	Off	Off/On
		Timeout	60sc	30sc-120sc
		Hysters.	10Pa	.5-30Pa
		.--Back--		
	Pid	Kp	15	0-100
		Ki	30	
		Kd	0	
		Spl. Time	15sc	5sc-600sc
		Revers	Off	Off-On
.--Back--				
.--Back--				
Set Proport.	Type	Str-Max		Str-Max Min-Max
	Start	30Pa		.-500Pa +500Pa
	Min	30Pa		
	Max	60Pa		
.--Back--				
Set Sensor	Measure	Pressure		Pressure Volume
	SmpCount	10		1-100
	Zero	0Pa		.-200Pa +200Pa
	Aout	Diff		Diff Positive Negative
	.--Back--			
Set Fan	Kfactor	70		0-1000
	LimitMax	100%		0-100%
	LimitMin.	20%		
	.--Back--			
Set Dout	-	Alarm		Alarm W.State
Set Timer	T1 Start	00:00		00:00 23:59
	T1 Stop	00:00		
	T2 Start	00:00		
	T2 Stop	00:00		
	.--Back--			
Set Time	Date	1.01.2022		
	Clock	00:00:00		
	.--Back--			
Set BMS Port	Address	1		0-255
	Bound	9600		2400- 19200
	Parrrity	No		No,Even, Odd
	.--Back--			
.--Back--				

# QBIT

QUANTUM CONTROL

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