



**Digital differential pressure controller
Model “DPD”**

Instruction manual

**DPDeng_rev2
January 09**

DIGITAL DIFFERENTIAL PRESSURE CONTROLLER

MODEL “DPD”

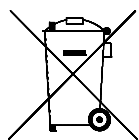
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ATTENTION: before using the product, carefully read this instruction manual in order to acquire a sufficient knowledge of the product itself.

1. TECHNICAL DATA TABLE

<i>Technical data</i>	
Power supply	115 - 230 V AC 50/60 Hz $\pm 10\%$ Upon request 24 – 48 V 50/60 Hz AC $\pm 10\%$
Fuse mains	230 V = 100 mA T ; 115 V = 250 mA T 24 V = 630 mA T; 48 V = 315 mA T
Temperature	Storage -20°C/+80°C Operation -10°C/+50°C
Power	3,5 W @ 230 V
Range	0 – 10 kPa
Unit	kPa; mmH ₂ O; “H ₂ O; mBAR; Inc “H ₂ O = measurement in inches with decimals notation Inc = measurement in inches with English notation (3” 3/8)
Available languages	Italian; English; French; German; Spanish
Dimensions	
Box version	150 X 225 h 80
DIN version	140 X 130 h 70
Weight	
Box version	1,100 Kg
DIN version	0,750 Kg

	- Do not expose directly to the sun in order to avoid uncontrolled temperatures to the circuits. - Protect against rain, water infiltrations and moist - Do not install on vibrating walls. - Use only cable gland with protection grade IP65 and of proper size (according to the cable used)
	- It is compulsory to install downstream the power supply line a circuit breaker located closed to it and identified as the knife switch of the device - Before opening the unit, be sure that unit is switched off and wires on clamps disconnected, including connection to alarm / signal relays . <u>Do not attempt to repair the instrument, but contact MECAIR!</u> - All the wiring must be carried out by <u>skilled people</u> to prevent any risks of electric shock or fire. - All electrical connections must follow different paths vs all the other uses.



WEEE

This instrument must be disposed of as special industrial waste according to the existing norms.

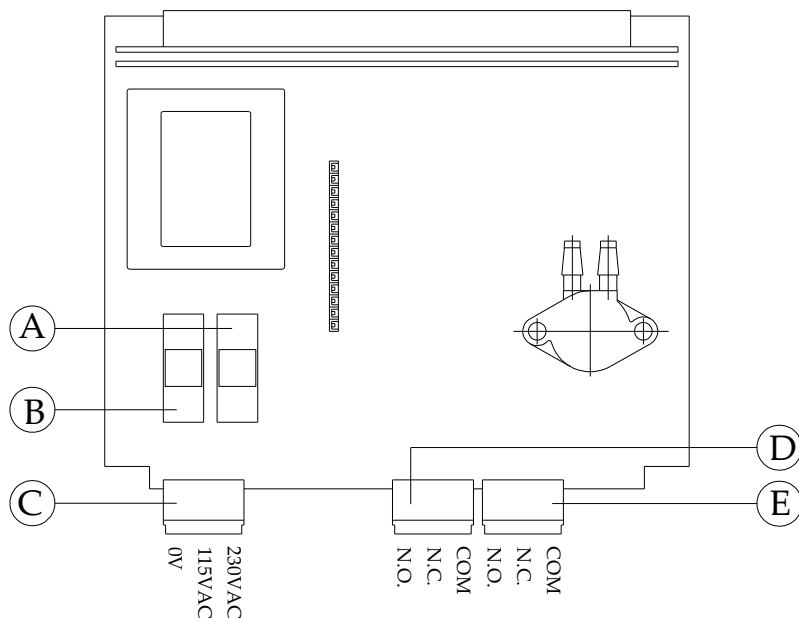
N.B.: The numbers and the letters within square brackets [...] indicate the positions on the drawings.

2. ELECTRICAL CONNECTIONS

It is compulsory to install downstream the power supply line a circuit breaker located closed to it and identified as the knife switch of the device

- 1) Connect the power supply to the terminal [C]
Neutral
115 V AC 50/60 Hz
230 V AC 50/60 Hz
- 2) Connect any equipment to the set relay terminal [D]
C
NC
NA
- 3) Connect any audio/visible signals to the alarm relay terminal [E] (flashing light, siren)
C
NC
NA

Contact shown are without power supply



3. FUSES

Name	Dimensions	Value	Type	Drawing	Description
F1	5 x 20	100 mA	T	[A]	Supply mains 230 V
F2	5 x 20	250 mA	T	[B]	Supply mains 115 V
F1	5 x 20	630 mA	T	[A]	Supply mains 24 V
F2	5 x 20	315 mA	T	[B]	Supply mains 48 V

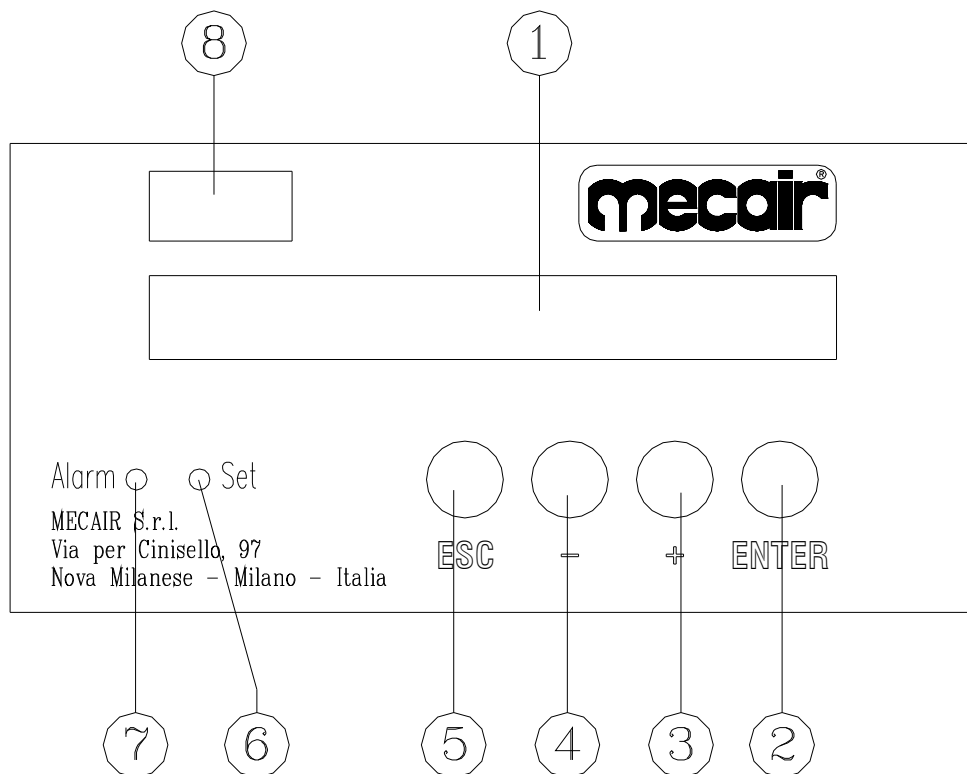
In case of replacement, it is **compulsory to respect** the value indicated on the table

4. PNEUMATIC CONNECTIONS

The instrument is supplied with two filtering taps to be used to connect the instrument and the areas to be measured.

Use a 4/6 rilsan hose.

5. BOARD PANELS AND CONTROLS



1	Display	Displays Delta-P value, the setting and the messages
2	Enter key	Allows to enter the menu items, and to confirm data after modifications
3	+ key	Increases the datum to be modified or changes options in the menu items. Displays the alarm messages
4	- key	Decreases the datum to be modified or changes options in the menu items. Cancels the alarm messages
5	Esc key	Allows to exit the menu pages
6	Set Led	Switches on when the set "Set" value is exceeded
7	Alarm Led	Switches on in case of alarm. Possible alarms are: the set "Alarm" value is exceeded sensor failure invalid configuration data
8	Model	DP Digital 5 languages 5 units 1 Delta-P set 1 alarm set

6. START UP

Power the device.

When switching on, the display [1] displays the model followed by the equipment version; after 3 seconds, it will display the pressure value.

7. CONFIGURATION

To enter the configuration menu, press “Enter” key [2]

Press “+” key [3] to move to the following menu, “-“ [4] to move to the previous menu.

Press “Esc” key [5] to go back to the pressure value display.

Language selection	Select one of the 5 programmed languages Press “Enter” [2] to display the selected language By pressing either “+” [3] or “-“ [4] it is possible to select a language among the 5 available ones (ITALIAN; ENGLISH; FRANCAIS; DEUTSCH; ESPANOL) Press “Enter” [2] to go back to the menu after changing the setting. Press “Esc” [5] to go back to the pressure value display
Unit	Select one of the 5 available units Press “Enter” [2] to display the selected unit By pressing either “+” [3] or “-“ [4] it is possible to select a unit among the 5 available ones (kPa; mmH2O; “H2O; mBAR; inc) Press “Enter” [2] to go back to the menu after changing the setting. Press “Esc” [5] to go back to the pressure value display
Set value input	Value above which the Set relay closes. Led [6] on Press “Enter” [2] to display the current value By pressing either “+” [3] or “-“ [4] the parameter value is either increased or decreased (an extended pressure increases the parameter switch speed) Press “Enter” [2] to go back to the parameter selection menu after changing the parameter itself. Press “Esc” [5] to go back to the pressure value display
Alarm value input	Value above which the alarm relay closes. Led [7] on Press “Enter” [2] to display the current value By pressing either “+” [3] or “-“ [4] the parameter value is either increased or decreased (an extended pressure increases the parameter switch speed) Press “Enter” [2] to go back to the parameter selection menu after changing the parameter itself. Press “Esc” [5] to go back to the pressure value display
Pressure delay from 0 to 25 Sec with second decimals adjustment	Exceeding switching limit minimum time (pressure fluctuations for times shorter than that are ignored) Press “Enter” [2] to display the current value By pressing either “+” [3] or “-“ [4] the parameter value is either increased or decreased (an extended pressure increases the parameter switch speed) Press “Enter” [2] to go back to the parameter selection menu after changing the parameter itself. Press “Esc” [5] to go back to the pressure value display
Zero pressure	Sensor Zero setting Disconnect the hoses from the filtering taps before carrying out the Zero setting. Press “Enter” [2] to display the current pressure value By pressing “+” [3] the sensor is set to Zero and the Zero value is saved Press “Enter” [2] to go back to the parameter selection menu after changing the parameter itself. Press “Esc” [5] to go back to the pressure value display Connect the hoses to the filtering taps
LCD Contrast	To adjust the display contrast (0-63) Press “Enter” [2] to display the current value of the parameter that adjusts the display contrast (0-63) By pressing either “+” [3] or “-“ [4] the parameter value is either increased or decreased and the adjustment effects are visible on the display Press “Enter” [2] to go back to the parameter selection menu after changing the parameter itself. Press “Esc” [5] to go back to the pressure value display

8. TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
The display does not switch on	Lack of power supply	Check fuses F1 [A] or F2 [B] Check mains connections [C]
Pressure value is not correct	Disconnect the hoses from the pressure taps. If the value is not zero, carry out a Zero setting.	Reset the pressure value, refer to the “Zero Pressure” item in the menu

