

TECHNICAL DATASHEET

New

CE

**Pressure transmitter
CP 50**



- Differential pressure transmitter CP50.
- Measuring range from 0/+1000 Pa to -5000/+10 000 Pa.
- Configurable intermediary and central zero ranges.
- 0-10 V or 4-20 mA output, active sensor, power supply 24 Vac/Vdc (3-4 wires)
- ABS IP 65 housing, without display.
- Quick and easy mounting with the "1/4 turn" system with wall-mount plate.

■ Features of the transmitter

Pressure

Working principle : a piezoresistive sensitive element creates a proportional voltage from the pressure applied on the sensor.

- Measuring rangefrom -5000/+10 000 Pa (configurable)
- Unit of measurementPa, mmH₂O, mbar, lnWg, mmHg
- Accuracy *±2% of reading ± 3 mmH₂O
- Response time1/e (63%) 0,3 sec.
- Autozeromanual with push-button
- Type of fluidair and neutral gases
- Overpressure tolerated7500 mmH₂O

■ Features of the housing

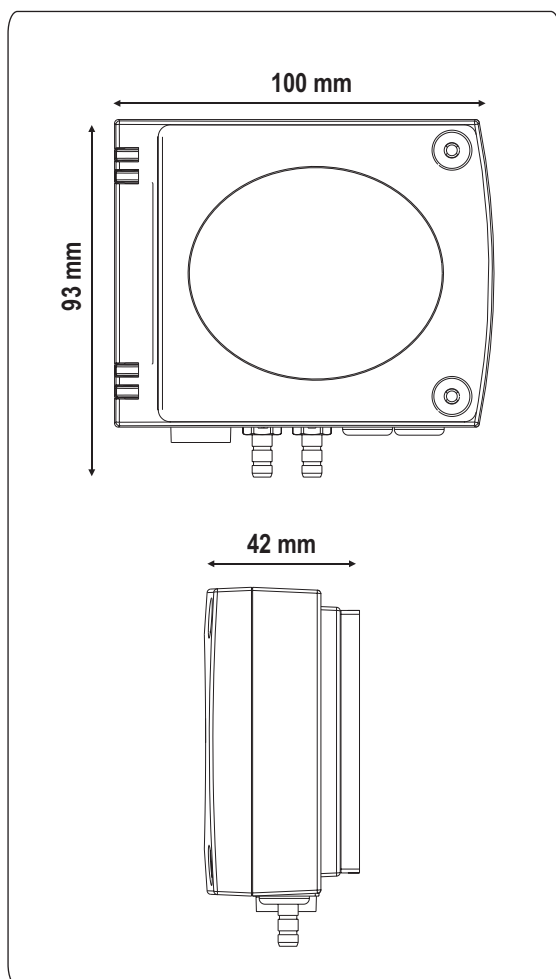
- HousingABS
- Fire-proof classificationHB as per UL94
- Dimensionssee drawing beside
- ProtectionIP 65
- Connectionsbarbed fittings Ø 5,2 mm
- Cable gripfor cables Ø 7 mm max.
- Weight110 g

■ Technical Specifications

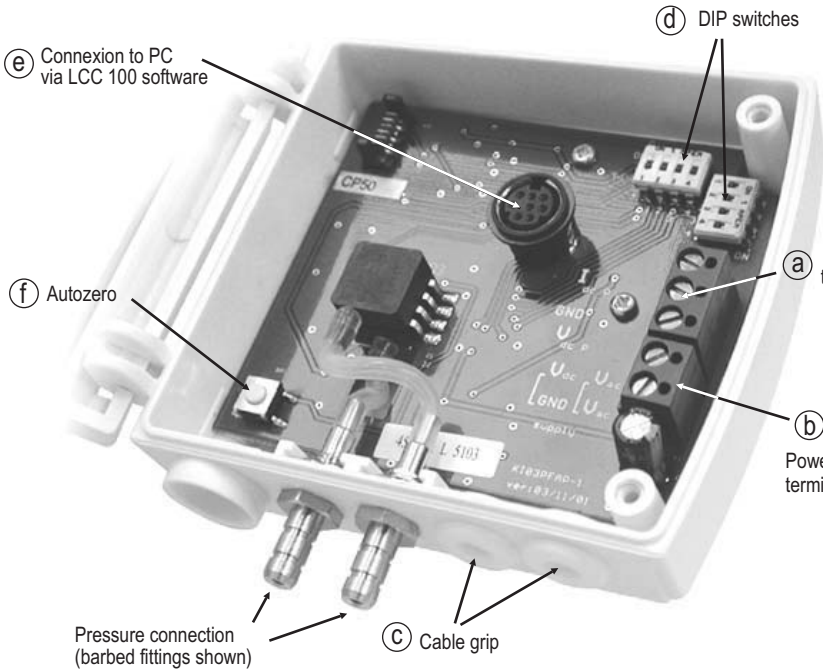
- Output / power supplyactive sensor 0-10 V or 4-20 mA
(power supply 24Vac/Vdc± 10%), 3-4 wires
maximum load :500 Ohms(4-20 mA)
minimum load: 1K Ohms(0-10 V)
- Consumption2 VA(0-10V)
- Electro-magnetical compatibility ...EN 61326
- Electrical connectionscrew terminal block for cables Ø 1.5 mm² max
- Communication to PC KIMO RS 232 cable
- Working temperature0 to +50°C
- Storage temperature -10 to +70°C
- Environmentair and neutral gases

*All the accuracies indicated in this technical datasheet were stated in laboratory conditions, and can be guaranteed for measurements carried out in the same conditions, or carried out with calibration compensation.

■ Dimensions of the housing
(including the wall-mount plate)



Connection



0-10V output

- (a) GNDground
 Vdc P.....direct voltage (pressure)

OR

4-20 mA output

- (a) Idc Pdirect current (pressure)
 GNDground

Direct voltage power supply

- (b) Vdcdirect voltage
 GND ground

OR

Alternative voltage power supply

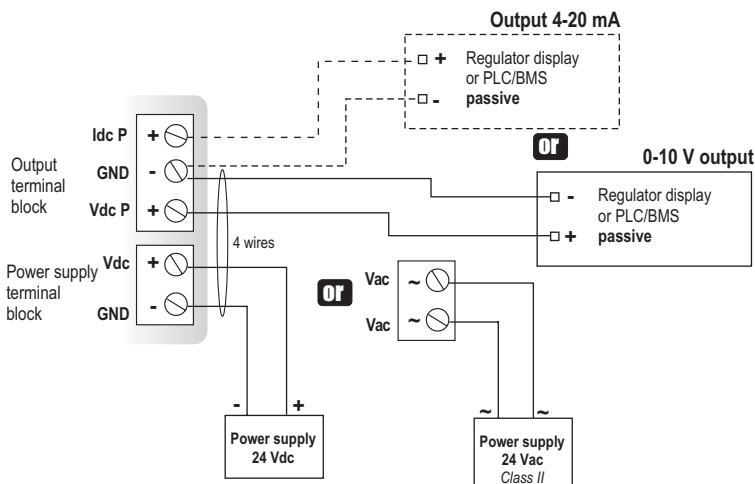
- (b) Vac.....alternative voltage (phase)
 Vac.....alternative voltage (neutral)

(c) Cable grip : to insert the cable, it is required to slightly cut the rubber.

Electrical connections - as per norm NFC15-100

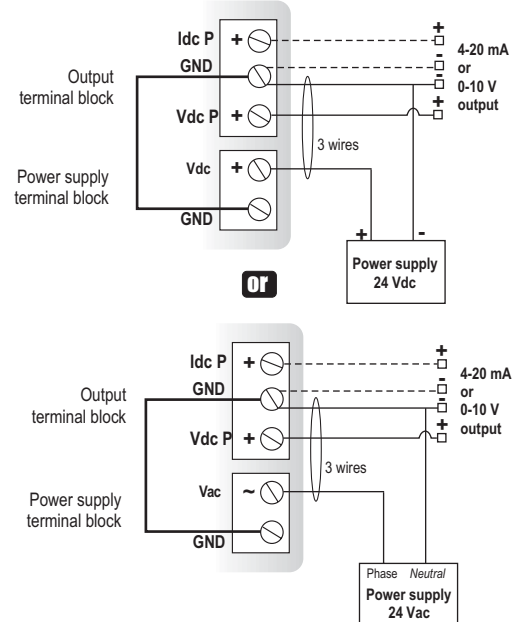
⚠ This connection must be made by a qualified technician. To make the connection, the transmitter must not be energized.

4 wires



3 wires

⚠ To make a 3-wire connection, **before powering up the transmitter**, please connect the output ground to the input ground. See drawing below.



■ Autozero

To make an autozero, please disconnect the 2 pressure connections and press on the push-button.

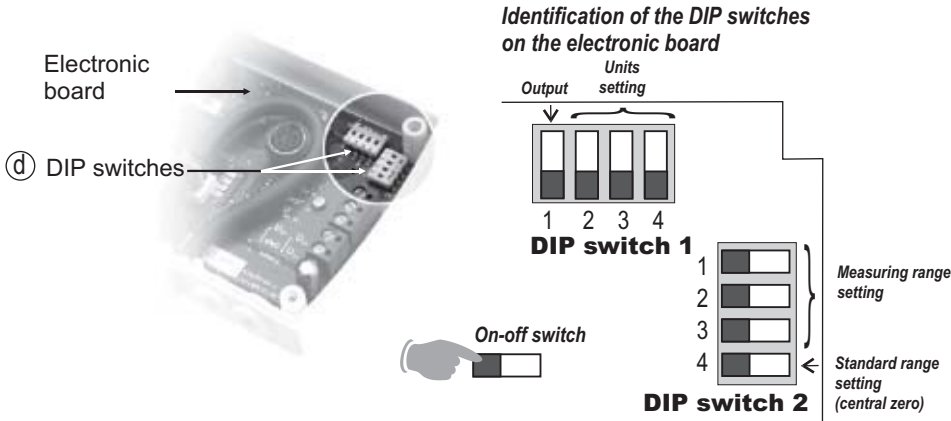


■ Configuration

It is possible to configure the measuring ranges, the units, the output of the instrument (according to the model) either by **switch** and/or **software** (connections ⑥ and ④ on drawing "connection").

■ Configuration by **DIP switch**

To configure the instrument, please unscrew the 2 screws from the housing, and then open it.



To configure the transmitter, **it must not be energized**. Then, you can make the settings required, with the DIP switches (as show on the drawing beside). When the transmitter is configured, you can power it up.

Caution!

Please follow carefully the combinations beside with the DIP switch. If the combination is wrongly done, the following message will appear on the display of the transmitter "CONF ERROR".
In that case, you will have to unplug the transmitter, place the DIP switches correctly and then, power the transmitter up.

• **Output setting** DIP switch 1

To set the type of analogic output, please put the on-off switch of the output as shown beside.

Configurations	4-20 mA	0-10 V
Combinations	 1 2 3 4	 1 2 3 4

• **Units setting**

DIP switch 1

To set the measuring unit, put the on-off switches 2,3 and 4 of units as shown beside.

Configurations	Pa	mm H ₂ O	mbar	inWG	mmHG
Combinations	 1 2 3 4	 1 2 3 4	 1 2 3 4	 1 2 3 4	 1 2 3 4

• **Measuring range setting**

DIP switch 2

To set the measuring range, put the on-off switches 1, 2 and 3 of the measuring range as shown beside.

Example :
0 ----> +7500 Pa, the measuring range is 7500 Pa
-500 Pa ----> +500 Pa, the measuring range is 1000 Pa

To configure other intermediary ranges, and for an easier and more friendly configuration, please refer to the "configuration via software".

Combinations	units				Pa	mm H ₂ O	mbar	in WG	mm HG
	1	2	3	4					
1					1000	2500	5000	7500	10000
2					100	250	500	750	1000
3					10	25	50	75	100
4					4	10	20	30	40
					7,5	20	40	60	75

• **Standard range / central zero setting** DIP switch 2

To set the type of range, put the on-off switch 4 as shown beside:

Example : standard / 0 (0 / 1000 Pa)
central zero (-500 Pa / 0 / +500 Pa)

Configurations	Full scale	Central zero
1		
2		
3		
4		

■ **Configuration via software**
(with optional LCC100 software)



An easy and friendly configuration with the software !
You can configure your own intermediary ranges.

⚠ **Caution !**

For a pressure transmitter, the minimum configurable range is 10% of the full range.

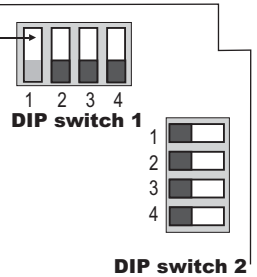
Example : for a transmitter with a range of 0-10 000 Pa, the minimum configurable range is 0-1000 Pa.
For example, you can configure your transmitter with a range of -200 to +800 Pa, from 0 to +6000 Pa, or from -4500 to +4500 Pa...

• **To access the configuration via software :**

- Set the DIP switches as shown beside. *Nota : the on-off switch 1 of the DIP switch 1 can be in any position (selection of the analogic output 0-10 V or 4-20 mA).*
- Connect the cable to the transmitter plug (see "connections").

• **Please refer to the user manual of the LCC 100 to make the configuration.**

Any position
(no specific
position required)



⚠ **Caution !**

The configuration of the parameters can be done **either with the DIP switch, OR via software** (you cannot combine both solutions).

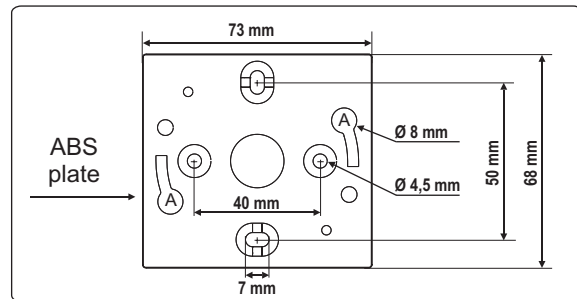


■ **Mounting**

Installation : mount the ABS plate on the wall (this plate is supplied with the transmitter). Drilling : Ø 6 mm (with the screws and pins supplied with the transmitter). Insert the transmitter on the plate (see A on the drawing beside) and rotate its housing in clockwise direction until you hear a "click" which confirms that the transmitter is correctly installed.

⚠ **Caution !**

Once the transmitter is installed and powered up, please make an autozero to guarantee the correct working of the transmitter in any position.



■ **Maintenance**

Please avoid any aggressive solvent.
Please protect the transmitter and its probes from any cleaning product containing formol, that may be used for cleaning rooms or ducts.

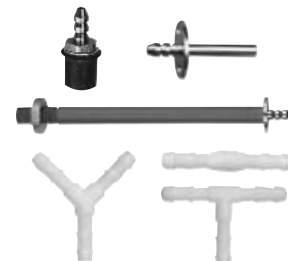
■ **Options**

- Power supply class 2, input 230 Vac, output 24 Vac, ref.KIAL-100A
- Configuration software LCC 100 with RS 232 cable



■ **Accessoires**

- Connection tube
- Connection fittings
- Through connections
- Straight connections
- Spherical coupling nut



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