

(E)DI3-72 INSTRUCTION FOLDER

INTRODUCTION

DI3-72.AV5/AV1, DI3-72.F1K and DI3-72.AV6 are μ -processor based digital panel meters with a double input for the measurement of both AC current and AC voltage for the first one, autoranging frequency measurement for the second one and both DC current and DC voltage for the third one. All parameters are selectable by means of dip-switches. For a correct and long-lived working of this instrument, follow scrupulously the below mentioned instructions.

NOTE: only for DI3-72.F1K (frequency meter), no parameters setting is requested because it performs an autoranging selection of the display scale, from 1 to 999Hz. Connect the measuring input as indicated in figure 7.

1. INSTALLATION

Put the appropriate self-sticking label with the engineering unit "A, V, mA or mV" on the position indicated by the arrow, as shown in figure 1. Subsequently, insert the instrument into the panel and fasten it through the two brackets (1, fig.1), fixed by two fastening screws (2, fig. 1).

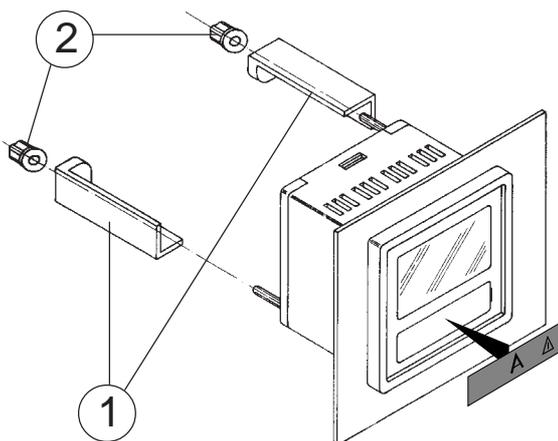


fig. 1

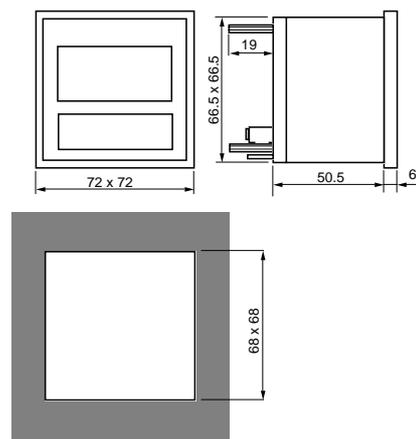
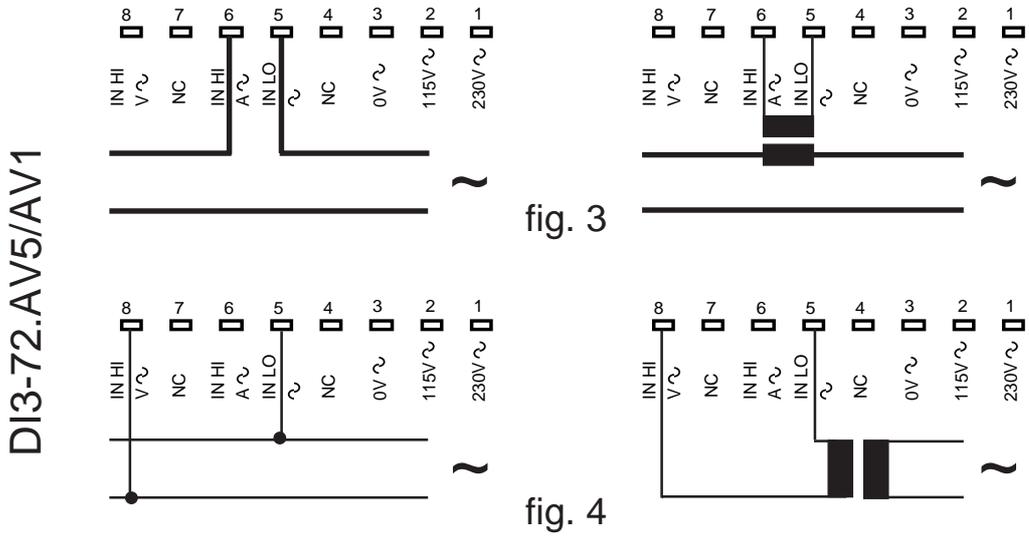


fig. 2

Figure 2 shows the overall dimensions and the panel cut-out.

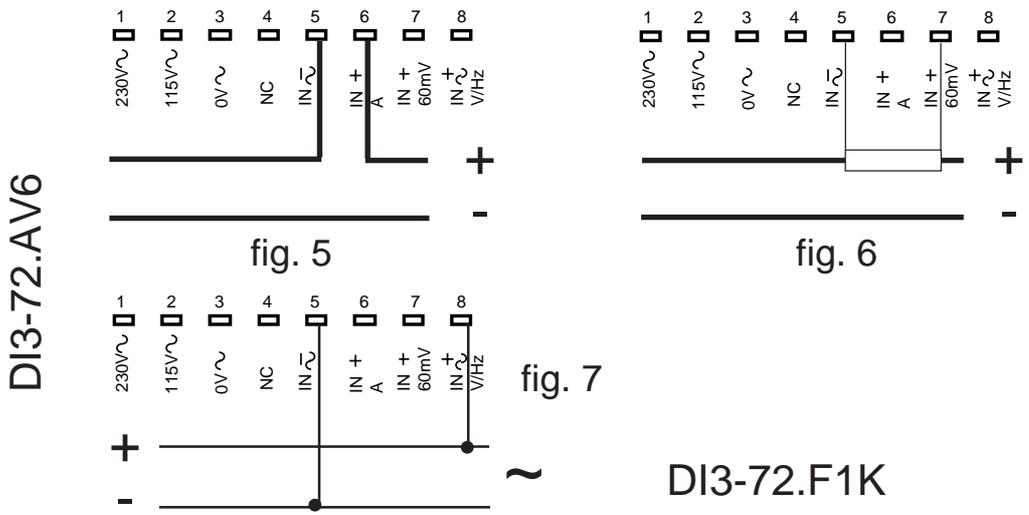
AC measurements

Figure 3 shows the wiring diagrams of DI3-72.AV5/AV1 connected as an ammeter and figure 4 its connections as a voltmeter.



DC measurements and frequency measurements

Figure 5 and 6 show the wiring diagrams of DI3-72.AV6 connected as an ammeter: figure 5 shows the direct connection (max. 1A), fig.6 the shunt connection (60mV), and figure 7 the connection of the instrument as a voltmeter or as a frequency meter (this latter measurement must be considered only as an AC type).



DI3-72.F1K

2. POWER SUPPLY

POWER SUPPLY TYPE	SCREW CONNECTOR
230 VAC (standard)	1 , 3
115 VAC (standard)	1 , 2
48 VAC (on request)	1 , 3
24 VAC (on request)	1 , 2
9 to 32 VDC galv. insulat. (on request)	(-)1 , (+)2

3. PRELIMINARY OPERATIONS

Before supplying the instrument, make sure that the supply voltage correspond to what is shown on the label (see figure 8).

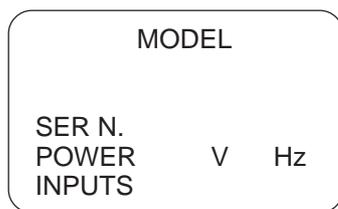


fig. 8

Only for the models DI3-72.AV6 and DI3-72.AV5/AV1 remove the front cover to set the relevant parameters; see figures 9 and 10.

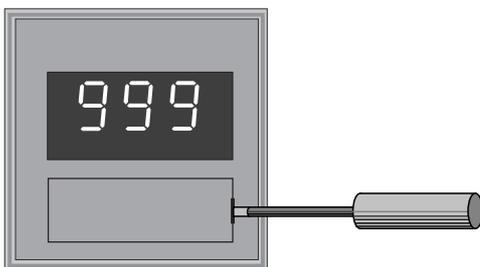


fig. 9

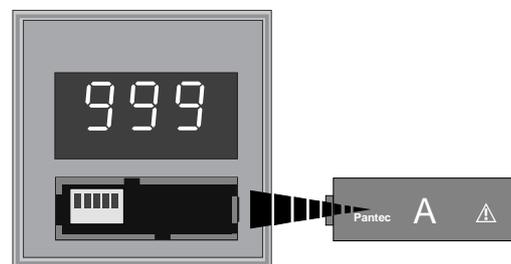


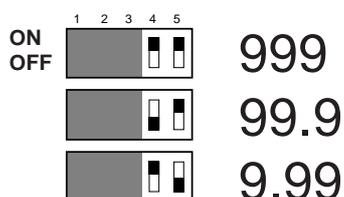
fig. 10

AC measurements (DI3-72.AV5/AV1)

4A. INPUTS

As indicated before, the instruments are suitable to measure both 1A / 5A currents and voltages up to 100V / 600V in the same case, according to the model. Use inputs 5 and 6 for current measurements and inputs 5 and 8 for voltage measurements as indicated in paragraph 1.

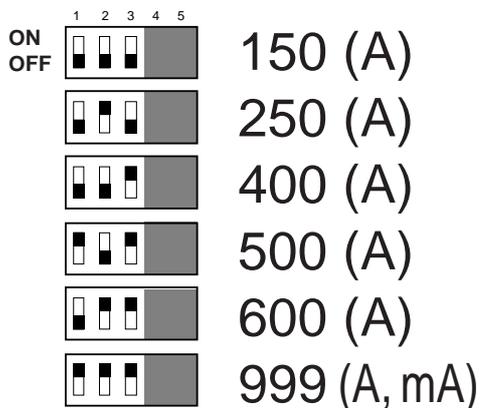
5A. DECIMAL POINT SELECTION



Remove the front cover of DI3-72 as indicated in figures 9 and 10. For the decimal point selection, use dip-switches 4 and 5 as shown in the figure on the left.

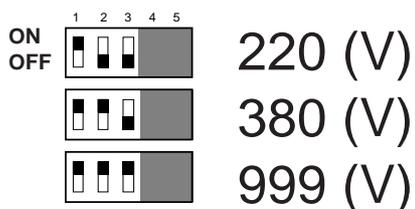
6A. CT / VT PRIMARY AND DIRECT CONNECTION SELECTION

Current measurements



CT connection: set dip-switches 1, 2 and 3 according to what is shown in the figure on the left. The different position of the decimal point allows you to change these scales into either: **15.0 - 25.0 - 40.0 - 50.0 - 60.0 - 99.9** or **1.50 - 2.50 - 4.00 - 5.00 - 6.00 - 9.99**.
Direct connection: set the dip-switches for 5A measurements as per 5.00 (A), for 1A measurements as per 999 (mA).

Voltage measurements



VT connection: set dip-switches 1, 2 and 3 according to what is shown in the figure on the left. The 100VAC input can be connected to a VT with a secondary of 100VAC and a primary of 220V, 380V or 1000V; the relating primary selection must be done as indicated on the left.

Direct connection: set the dip-switches for both 600VAC and 100VAC measurements as per 999 (V), and only for the second one, the decimal point position must be "99.9".

NOTE: the minimum measuring values for both the current and voltage inputs are 3% of the full scale (f.s.) except for the 600VAC input where the minimum measuring value is 5% of f.s.

7A. SWITCHING ON

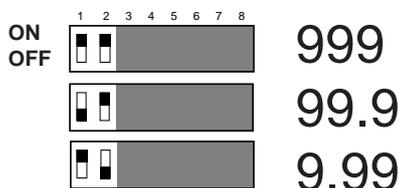
After setting the whole instrument, replace the front cover of DI3-72. Subsequently power the instrument; as soon as it is powered, it will show for a few seconds the selected primary range, for example "40o" in case of "400 A" selection, and subsequently the measured value. If the display shows "00o", it means that the primary range is of "999" and dip-switches 1, 2 and 3 are all in "ON" position, see paragraph 6.

DC measurements (DI3-72.AV6)

4B. INPUTS

As indicated before, the instruments are suitable to measure a current up to 1A (direct connection), a voltage up to 60mV (shunt connection for current measurement) and voltages up to 100V / 600V in the same case. Use inputs 5 and 6 for current measurements (1A), inputs 5 and 7 for current measurements (60 mV), and inputs 5 and 8 for voltage measurements as indicated in paragraph 1.

5B. DECIMAL POINT SELECTION

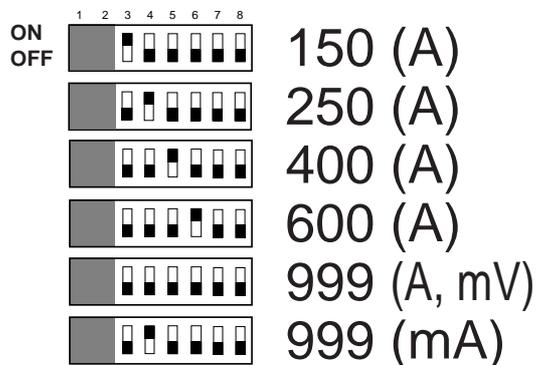


For the decimal point selection use dip-switches 1 and 2 as shown in the figure on the left.

6B. SHUNT AND DIRECT CONNECTION SELECTION

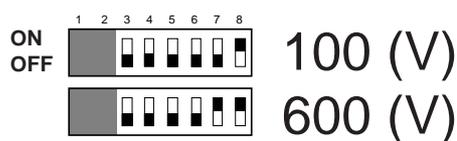
Current measurements

Shunt connection: set dip-switches



3, 4, 5, 6, 7 and 8 according to what is shown in the figure on the left. The different position of the decimal point allows you to change these scales into either: **15.0 - 25.0 - 40.0 - 60.0 - 99.9** or **1.50 - 2.50 - 4.00 - 6.00 - 9.99**.
Direct connection: set the dip-switches for 1A measurement as per 999 (mA).

Voltage measurements



Direct connection: set dip-switches 3, 4, 5, 6, 7 and 8 according to what is shown in the figure on the left. Only for the 100V measurement, the decimal point position must be "99.9".

NOTE: the measuring ranges for both the current and voltage inputs are from -99 to 999 in accordance with the dip-switch selection.

7B. SWITCHING ON

After setting the whole instrument, power the instrument; as soon as powered, it will show for a few seconds " - - - ", and subsequently the measured value.

NOTE

Inside the instrument there are some calibration potentiometers that are factory adjusted. To avoid any accuracy loss, please do not touch them.



WARNING

Do not touch the inside parts of the instrument when power supply and measuring inputs have already been connected to an electrical installation and the latter has been powered.