



#### Main applications

- Extrusion lines
- Electrical panels
- Test equipment
- Food processing plant

#### Main features

- AC voltage, AC current direct input on instrument terminals
- Protected code configurable from keypad
- 4 to 20mA retransmitted output
- Up to 3 relay outputs
- Configurable by serial link
- Labels to customize measured physical unit

#### GENERAL

Microprocessor based indicator in both 48x48 (1/16 DIN) and 96x48 (1/8 DIN) formats manufactured with SMT.

The instruments have a lexan membrane faceplate (guaranteed to IP65) which has 3 keys, a 3 digit display for the 48x48 format and a 3 / 4 digit display for the 96x48 format, and 3 indicating LED's for the output statuses.

The input signal section provides for the visualisation of the sinusoidal effective value corresponding to following signals:

- AC voltage:  
0 to 2, 0 to 20, 0 to 200 and 0 to 500Vac
- AC current:  
0 to 20, 0 to 50, 0 to 200mAac  
0 to 1, 0 to 5Aac

The selection is made using the faceplate keys and correct input terminals.

No external shunt or adapter is required. A digital input (24Vdc/4mA) is available for resetting, hold, flash, peak handling or releasing latch. The instruments have a maximum of 3 outputs that can be mechanical relays (5A/250V) or logic outputs (0 to 11Vdc).

One output of 4 to 20mA (max. 150Ω) is available for retransmitting the measured input signal.

The retransmission output, the digital input and the third output are alternatives in the 48x48 format, all these options are available contemporaneously in the 96x48 format.

Finally, a triac can be fitted (as an alternative to the other two relay outputs) to drive resistive loads up to a maximum of 2,5A at 220V.

The programming of the instrument is made easy by grouping the parameters in function blocks (**CFG** for the alarm hysteresis, **Inp** for the inputs, **Out** for the outputs...) and by a simplified data entry menu.

The configuration can be simplified even further using the PC programming kit made up of a connection cable and a menu guide program that runs under Windows (see data sheet cod. WINSTRUM). A configurable personal software protection code (password protection) can be used to restrict the levels of editing and displaying the configuration parameters.

#### TECHNICAL DATA

##### INPUTS

Accuracy:

0,2% f.s. ±1 digit for 2Vac, 20Vac, 20mAac, 50mAac, 1Aac inputs  
0,5% f.s. ±1 digit for 200Vac, 500Vac, 200mAac, 5Aac inputs

The measurement of the effective value considers the sinusoidal signal.

Sampling time 120msec, resolution 8000 steps.

Configurable decimal point position, scale -1999 to 9999 (4 digit display) or -999 to 999 (3 digit display with sign, only for the 96 format) with over- and under-range indication.

Voltage input for 2Vac, 20Vac, 200Vac, 500Vac with  $R_i > 1M\Omega$ .

Current input for 20mAac, 50mAac, 200mAac with  $R_i = 1,6\Omega$ .

Current input for 1Aac, 5Aac with  $R_i = 16m\Omega$ .

##### Digital input

$R_i = 5,6K\Omega$  (24V, 4mA) isolated to 1500V

Function is configurable as alarm or memory reset, hold, flash, zero, display of the peak value (max., min. or peak to peak).

## OUTPUTS

### Relay

with NO (NC) contacts rated at 5A/250V  
at  $\cos\phi = 1$ .

### Logic (only for Out1 and Out2)

Output type D 11Vdc,  $R_{out} = 220\Omega$   
(6V/20mA).

### Triac (only 96 format) for Out1, excluded Out2

24 to 240Vac  $\pm 10\%$ , 3Amax  
Snubberless,  $I^2t = 128A^2sec$

A maximum of three trip points can be set  
as absolute, deviation or symmetrical  
deviation alarms. The hysteresis of each  
alarm is individually configurable.  
Alarm masking with exclusion on power  
up, memory and configurable delay and  
minimum intervention time.  
The trip point may be set at any point on  
the scale.

### Analog Retransmission

4 to 20mA on max.  $150\Omega$  load.

## POWER SUPPLY

### 40A 48

Standard: 100...240Vac  $\pm 10\%$  max 8VA  
optional: 20...27Vac/dc  $\pm 10\%$  max 8VA

### 40A 96

Standard: 100...240Vac/dc  $\pm 10\%$  max 7,5VA  
optional: 11...27Vac/dc  $\pm 10\%$  max 5VA

50/60Hz, Protected by an internal fuse  
(not replaceable by the operator).

## AMBIENT CONDITIONS

**Working temperature range:** 0 to 50°C

**Storage temperature range:** -20 to 70°C

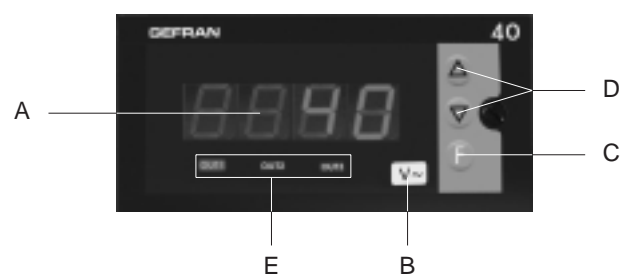
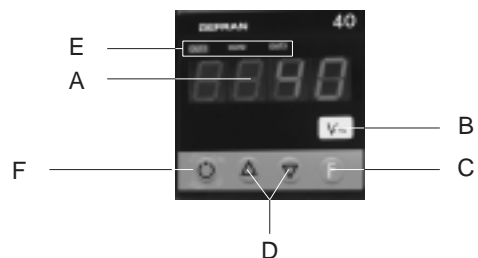
**Humidity:** 20 to 85%Ur non-condensing

## WEIGHT

160g. (48 format), 320g. (96 format) in  
the complete version

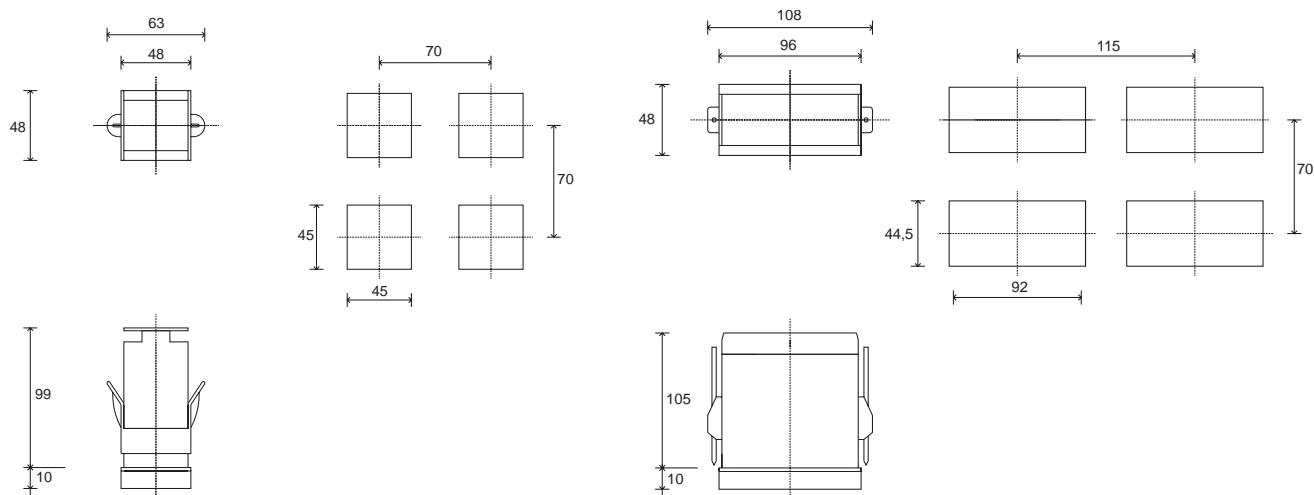
## FACEPLATE DESCRIPTION

- A - PV display: indication of process variable
- B - Label for engineering units
- C - "Function" key
- D - "Raise" and "Lower" keys
- E - Indication of the states of the outputs
- F - Key not used



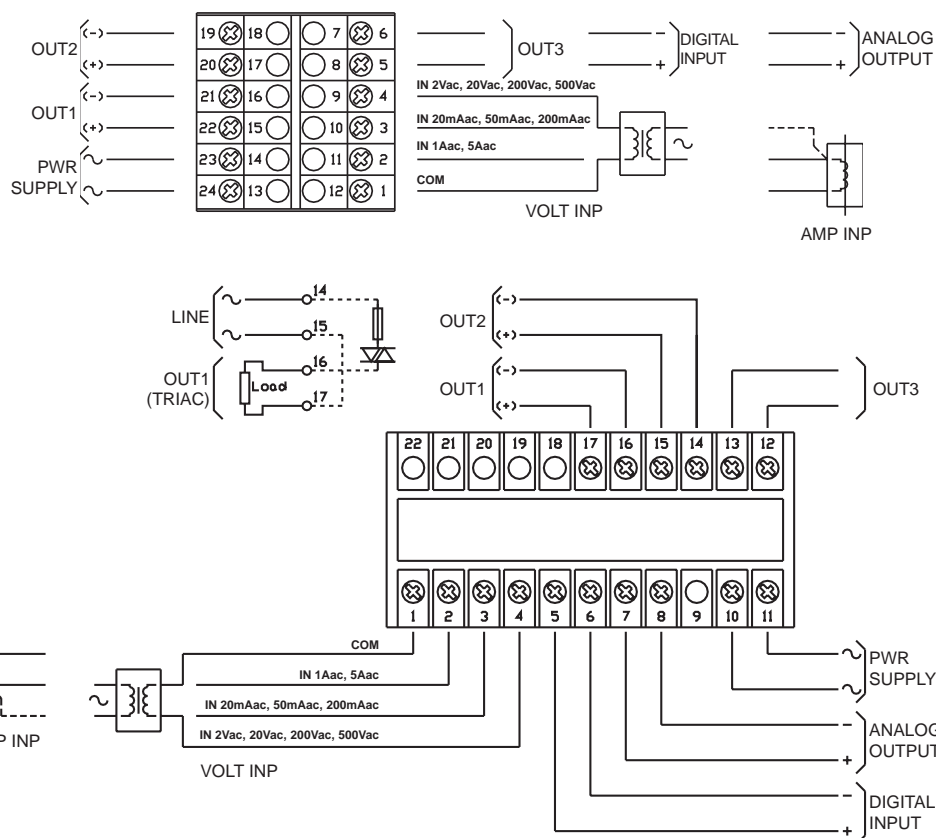
Red LED display  
IP65 faceplate protection

## DIMENSIONS and CUT-OUT



Dimensions: 48x48mm - 96x48mm (1/16DIN - 1/8DIN), depth 99mm - 105mm

## CONNECTION DIAGRAM



Apply user's manual warnings for a correct installation

## ORDER CODE

40A 48 4 0 0

NR. DIGITS	
4	4

OUTPUT 1, OUTPUT 2	
Relay, Relay	R R
Relay, Logic	R D

POWER SUPPLY	
0	20 to 27Vac/dc
1	100 to 240Vac

DIGITAL INPUT / RETRANSMISSION OUTPUT (alternative to output 3)	
0	None
1	Digital input
2	Analog retransmis. output 4...20mA on max 150Ω

OUTPUT 3 (alternative to digital input / retransmission output)	
0	None
R	Relay

40A 96 0 0

NR. DIGITS	
3 + sign	3
4	4

OUTPUT 1, OUTPUT 2	
Relay, Relay	R R
Relay, Logic	R D
Triac, None	T 0



POWER SUPPLY	
0	11 to 27Vac/dc
1	100 to 240Vac/dc

DIGITAL INPUT / RETRANSMISSION OUTPUT	
0	None
1	Digital input
3	Digital input + Analog retransmis. output 4...20mA on max 150Ω

OUTPUT 3	
0	None
R	Relay

Please, contact GEFRAAN sales people for the codes availability.

GEFRAN spa reserves the right to make any modification of the design or function, at any moment without prior notice

	Conformity C/UL/US File no. E216851
	The instrument conforms to the European Directives 89/336/CEE and 73/23/CEE with reference to the generic standards: - CEI-EN 61000-6-2 (immunity in industrial environments) - EN 61000-6-3 (emission in residential environments) - EN 61010-1 (safety)

**GEFRAN**

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