

40B 48 / 40B 96

AC CURRENT / VOLTAGE CONFIGURABLE INDICATOR - ALARM UNITS



Main applications

- Extrusion lines
- Rubber presses
- Test benches
- Lapping machines
- Food processing equipment
- Weighing
- Pressure trips
- Positioners
- Motorised potentiometers

Main features

- Strain-gauge or potentiometer input - configurable by faceplate
- Sensor supply check
- Easy to calibrate with sensitivity auto-ranging
- Protected by a personal code
- Configurable by serial link
- Internal linearisation for engineering units
- Labels provided for the more common physical units
- Sampling time and trip intervention programmable between 15 and 120msec with resolution between 2000 and 8000 steps
- Retransmission of the measured variable signal
- 3 trip points, completely configurable from the faceplate

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 or a 3 / 4 digit display for the 96x48 format, and 3 indicating LED's for the output statuses.

The input signal can be selected from a wide range of sensors:

- Potentiometer (minimum 100Ω)
- Load cell with sensitivity autoranging between 1,5 and 3,3mV/V.
- Strain-gauge pressure sensor

The selection is made using the faceplate keys.

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

alternative 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. 80021).

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. ±1digit.

Sampling time 120msec with sensor supply check, configurable down to a minimum of 15msec with reduction of the resolution to 2000 steps.

Configurable decimal point position for linear inputs from potentiometer or strain-gauge for scales -199.9 to 999.9 (4 digit display) and -99.9 to 99.9 (3 digit display with sign) with over- and under-range indication.

32-segment configurable linearisation can be used.

Strain-gauge

350Ω, maximum sensitivity 3.3mV/V with positive or symmetrical polarisation and calibration that automatically calculates the sensitivity.

Potentiometer

Supply 1,2V >100Ω

Digital input

Ri = 5,6KΩ (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 for 96 format), for Out1, disabled Out2
24 to 240Vac $\pm 10\%$, 3A max
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.

Retransmission

4 to 20mA on max. 150Ω load.

POWER SUPPLY

Standard: 100 to 240Vac/dc $\pm 10\%$
optional: 11 to 27Vac/dc $\pm 10\%$
50/60Hz, max. 8VA
protected by an internal replaceable fuse

POWER SUPPLY

SENSOR/TRANSMITTER

1,2Vdc for potentiometer $> 100\Omega$
5Vdc, 10Vdc max. 120mA
for strain-gauge 15Vdc, max 50mA
24Vdc $\pm 10\%$ unstabilised, max. 50mA

AMBIENT CONDITIONS

Working temperature range: 0 to 50°C

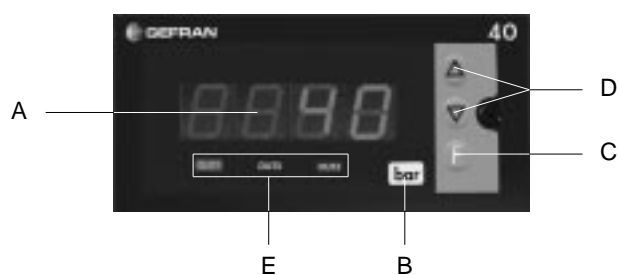
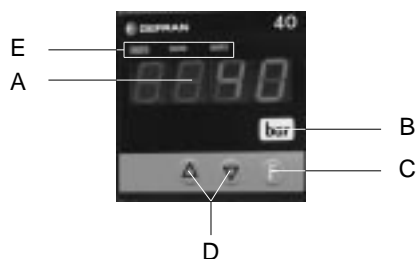
Storage temperature range: -20 to 70°C
Humidity: 20 to 85%Ur non-condensing

WEIGHT

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

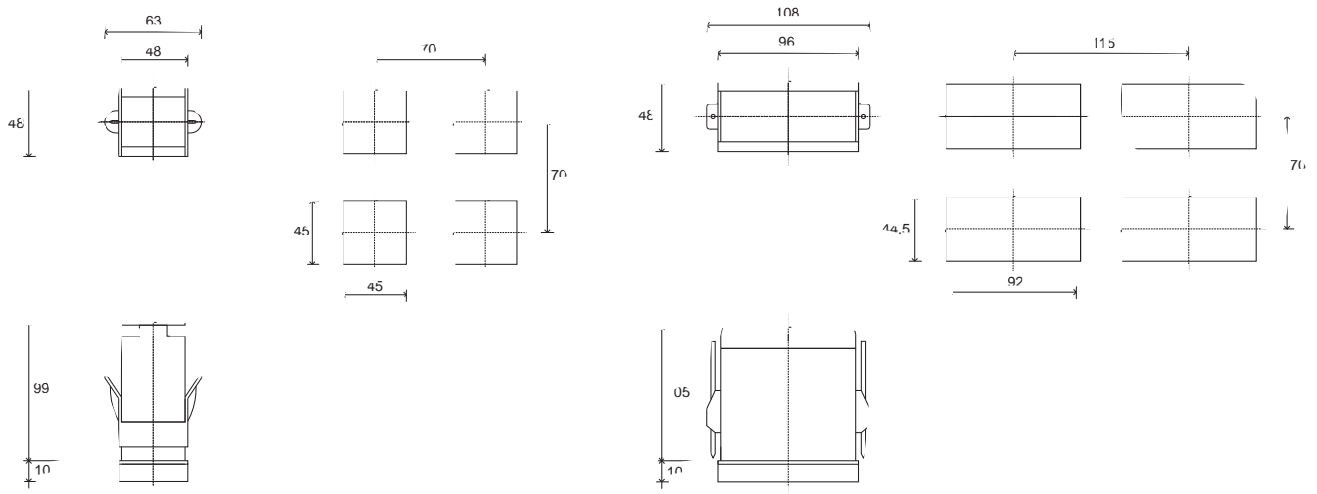
FACEPLATE DESCRIPTION

- 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



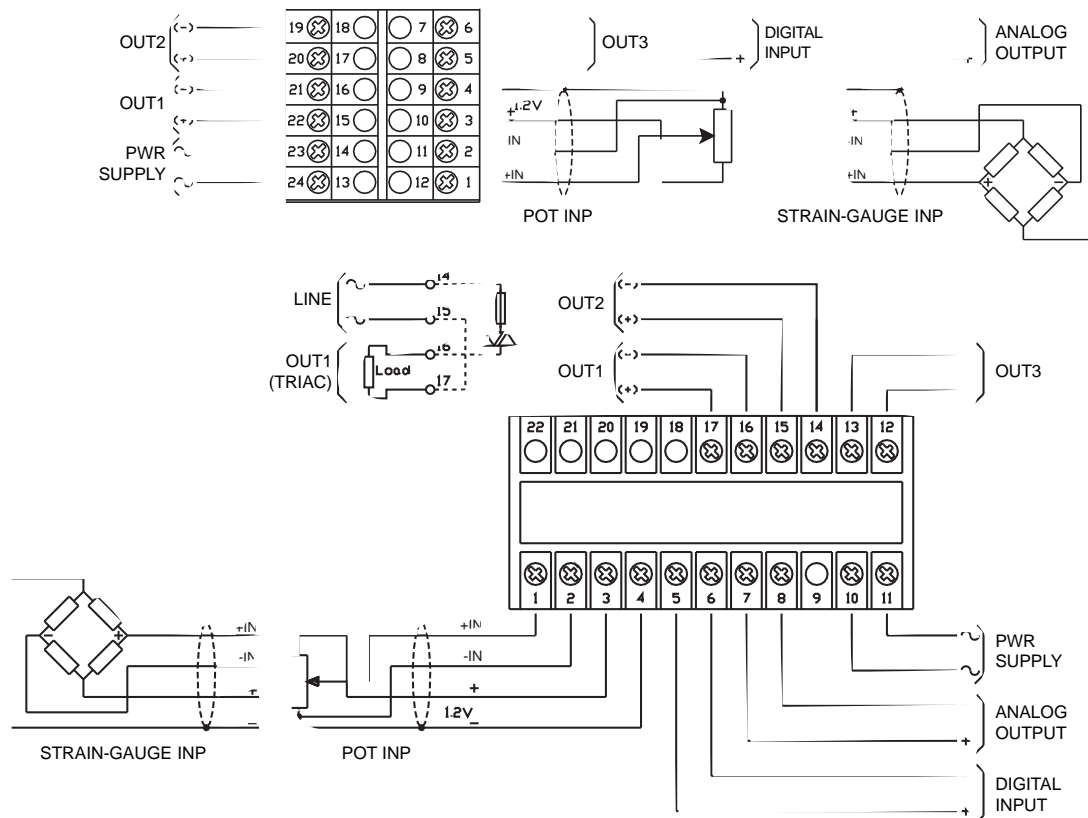
Red LED display
IP65 faceplate protection

DIMENSIONS and CUT-OUT



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

CONNECTION DIAGRAM



ORDER CODE

40B ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

FORMAT	
48 x 48	48
96 x 48	96

NR. DIGITS		
3 + sign	(only for 96 format)	3
4		4

SENSOR / TRANSMITTER POWER SUPPLY	
1,2Vdc (potentiometer)	0 1
5Vdc	0 5
10Vdc	1 0
15Vdc (transmitter)	1 5
24Vdc (transmitter)	2 4

OUTPUT 1, OUTPUT 2	
Relay, Relay	R R
Relay, Static D2	R D
Triac, None (only for 96 format)	T 0

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

DIGITAL INPUT / RETRANSMISSION OUTPUT (alternative to output 3 in the 48 format)	
0	None
1	Digital input
2	Retransmission output 4 to 20mA on max 150Ω
3	Both (only for 96 format)

OUTPUT 3 (alternative to digital input / retransmission output on the 48 format)	
0	None
R	Relay

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



The instrument conforms to the European Directives 89/336/CEE and 73/23/CEE with reference to the generic standards:
- EN 50082-2 (immunity in industrial environments) - EN 50081-1 (emission in residential environments) - EN 61010-1 (safety)



GEFRAN spa via Sebina, 74 - 25050 Provaglio d'Iseo (BS)
Tel. 03098881 - fax 0309839063 - Internet: <http://www.gefran.com>



cod. 81732 - 07/00