

Main applications

- Polymerisation and syntetic fibre production plants
- Food industry plants
- Extrusion lines and other machines for the plastics industry
- Weight indicators



Main features

- Pressure transmitter, force, strain-gauge, potentiometer, transmitter inputs
- Fast response time (2msec)
- Automatic calibration checking for strain-gauge 6-wires
- 32 segment linearisation
- Peak, valley, peak-to-peak memory
- Serial line: configurable optoisolated 4-wires.
Protocol:
GEFRAN CENCAL or MODBUS

GENERAL

Microprocessor digital indicator/relay unit in 96x48mm (1/8 DIN) format.

Mounting using SMT, it provides an extremely complete operator interface and IP54 faceplate protection (IP65 with protective cover).

The faceplate has a membrane keypad with 6 keys and a 5-digit LED display for the process variable and other parameters.

The model 2300 is designed for the acquisition of signals that have a high speed of variation.

The input type is selected using a combination of jumpers and keyboard settings and can be a standard linear signal (also with custom linearisation), or the output from a pressure probe, load cell or potentiometer.

There are also two logic inputs that can be configured for different functions such as alarm memory reset, peak memory reset, calibration check, enable remote setpoint, hold.

The same functions can also be configured for the faceplate keys.

The instrument performs the functions of memorizing the maximum peak value, minimum peak level, peak to peak value. An optoisolated analogue output is available for the retransmission of the input signal, remote setpoint or peak value.

The optional serial communications port can be Current Loop, RS232 or RS422/485, with CENCAL or MODBUS protocol (selectable).

It is possible to read from or write to any of the instruments parameters.

The programming procedure is simplified using a menu structure with different levels that enable the data to be found easily and rapidly.

TECHNICAL DATA

INPUTS

Accuracy 0,2% f.s. ± 1 digit

Sampling time 2msec

Strain-gauge

350 Ω (per pressione, forza, ecc.), strain-gauge sensor inputs with sensitivity of 1,5/2/2,5/3/3,3mV/V, and positive, symmetrical or negative polarisation.

Potentiometer

$\geq 350\Omega$, $R_i > 10 M\Omega$

DC - Linear

0...50mV / -25...25mV / -50...0mV
0...60mV / -30...30mV / -60...0mV
0...100mV / -50...50mV / -100...0mV
0...1V / -500...500mV / -1V...0V
0...10V / -5...5V / -10V...0V

For all voltage inputs

$R_i \geq 1 M\Omega$

0...20mA / 4...20mA, $R_i = 5\Omega$

Custom linearisation with 32 steps available.

Auxiliary inputs

Setpoint can be absolute or relative to the local setpoint.

0...10V, $R_i \geq 1 M\Omega$

0...20mA, $R_i = 10\Omega$

4...20mA, $R_i = 10\Omega$

Digital

Optoisolated 1500V.

2 digital inputs with configurable function:
reset latch, reset peak memory, calibration check, enable remote setpoint, Hold.
- NPN or PNP 24V/4mA

OUTPUTS

Relay

With rating 5A/250Vac at $\cos\varphi = 1$
(3,5A at $\cos\varphi = 0,4$).
Spark suppression on the NO contact.

Logic

Voltage output for SSRs
23Vdc, Rout = 470 Ω (20mA, max. 12V).

Retransmission

Isolated 1500V.
Retransmission of the input, the peak value, remote setpoints, or switch points configurable scale adjustable from the faceplate
0..10Vdc Rload > 500 Ω
0...20mA, 4...20mA Rmax = 500 Ω
Accuracy 4000 punti.
Response time 8 msec.

SERIAL LINE

Optoisolated 4-wires.
The instrument is available with interface
Current Loop (1200 baud) or RS485
(1200/2400/4800/9600 baud).
Protocol:
GEFRAN CENCAL or MODBUS

SENSOR / TRANSMITTER

SUPPLY

Isolated 1500V
5, 10 or 15Vdc/200mA or 24Vdc/100mA

POWER SUPPLY

100...240Vac $\pm 10\%$
11...27Vac/dc $\pm 10\%$
50...60Hz; 12VA max
Protection by internal fuse not serviceable by the user.

AMBIENT CONDITIONS

Working temperature: 0...50°C
Storage temperature: -20...70°C
Humidity: 20...85%Ur non condensing

ALARMS

3 (10) relay outputs are provided with configurable function
(Direct / Inverse / Relative / Relative symmetric)
- Hysteresis selectable in engineering units.
- Function: high or low alarms with selectable memory function (LATCH).
The relays may be energised or disenergised in the alarm condition.
The low alarm can be excluded at the power-on until the process variable has exceeded the alarm point.
The alarm relay will trip only when the process variable subsequently returns below the alarm point.
Response time:
for Out1 ... Out 2 = 2msec
for Out 3 ... Out 10 = 8msec

GEFRAN MD8 EXPANSION UNIT

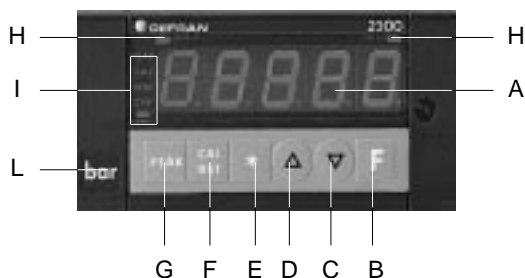
replace output 3
- with a further 8 switch points.

WEIGHT

450g

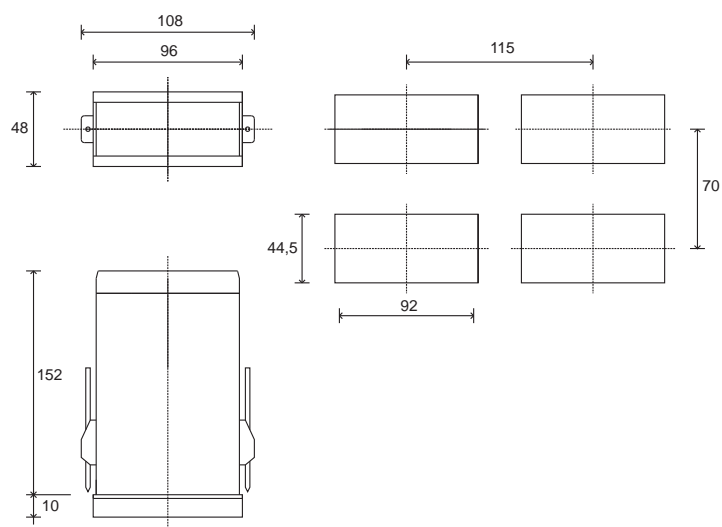
FACEPLATE DESCRIPTION

- A** - Indication of process variable, red digits h. 14mm
- B** - Function key
- C** - Lower key
- D** - Raise key
- E** - Special functions key
- F** - CAL-RST key
- G** - Peak key
- H** - Alarm indications, red led
- I** - Peak, Cal, Rem, Exp indication, red led
- L** - Label for engineering units



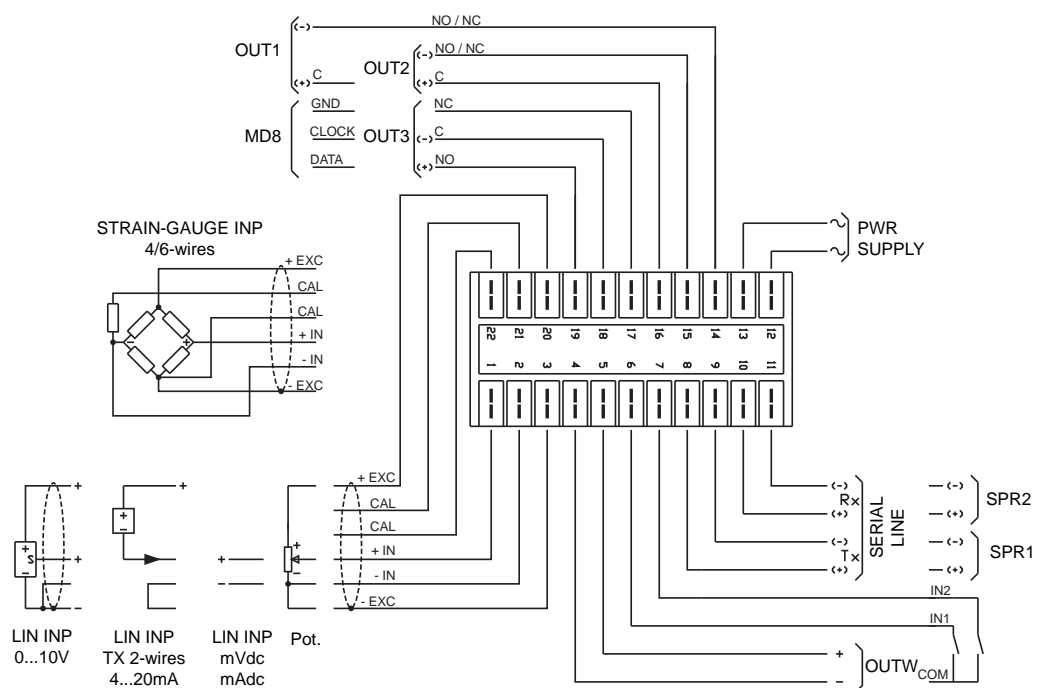
IP54 faceplate protection (IP65 available)

DIMENSIONS AND CUT-OUT



Dimensions: 96x48mm (1/8 DIN), depth 152mm

CONNECTION DIAGRAM



 Apply users' manual warnings for a correct installation

ORDER CODE

2300 ☐ ☐ ☐ ☐

VERSION	
Alarm outputs + 2SPR	SI
Alarm outputs + 2SPR + W	SW
Alarm outputs + Serial CL	SX1*
Alarm outputs + Serial 485	SX2
Complete Serial CL	CC1
Complete Serial 485	CC2




ALARM OUTPUTS	
3 relay outputs	3R*
3 logic outputs	3D
2 relay outputs + Out MD8	2R
2 logic outputs + Out MD8	2D

POWER SUPPLY	
11...27Vac/dc	0
100...240Vac	1*

CONFIGURATION	
None configuration: Standard	S
Custom configuration	C

(*) Standard model

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

	In conformity to ECC 89/336/CEE and 73/23/CEE with reference to standards: - EN 50082-2 (immunity in industrial environment) - EN 50081-1 (emission in residential environment) - EN 61010-1 (safety)
	C - TICK
	Conformity CSA NRTL/C certificated n. LR111880-1 (model with power supply type 1)

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