Main applications

- Plastics extrusion lines and injection moulding machines
- Polymerisation plant for synthetic fibre production
- Climatic chambers and test benches
- Continuous ovens and drying unit ceramics and bricks
- Chemical and pharmaceutical industries
- Furnaces
- Food processing plant
- Painting machines
- Water treatment
- Siderurgy industry
- Packaging machinery

Main features

- Universal input configurable from the faceplate
- Accuracy 0.2% f.s.
- Two control outputs: relay, logic or analogue with Heat/Cool function
- 3 configurable alarms
- 2 retransmission analogue outputs
- 2 digital inputs with configurable function
- Auxiliary input for C.T. or remote setpoint
- Heater Break or shortcircuit probe alarm
- Self-tuning, Soft-start, Auto-tuning, Man/Auto, Bumpless, Setpoint, Locale/Remoto
- Function multiset, set ramp, timer

GENERAL

Microprocessor controller, format 48x48 (1/16 DIN) manufactured using SMT. The instrument provides a complete operator interface, protected by a Lexan membrane that ensures level IP65 faceplate protection.

It has 4 keys, two green LED displays, each with 4 digits, 4 red indicating LED’s for the 4 logic or relay outputs, and a further 3 LED’s that are programmable to indicate the various operational states of the instrument.

The main input for the process variable is universal and provides the possibility to connect many types of input sensor: thermocouple type J, K, R, S, T, B, E, N, Ni-Ni18Mo, L; resistance thermometer Pt100 3-wires; thermistor PTC; linear inputs 0-50mV, 10-50mV, 2-10V, 0-10V, 0-20mA, 4-20mA, and potentiometer, all with the possibility of custom linearisation that can be defined using the faceplate keys. It is possible to activate correction of the input using a linear function defined by way of two points on it.

The type of input is selected from the faceplate keys and no external shunts or adapter are required.

A second auxiliary isolated analogue input is available, which can also be configured for a linear input (0-10V, 2-10V, 0-20mA / 4-20mA), for remote setpoint, potentiometer or current transformer. The auxiliary input function is completely configurable, including the possibility of a custom linearization. It is possible to configure the 2 available isolated digital inputs for selection of up to 4 local setpoints; start, stop and reset of internal timer; Auto/Man, Loc/Rem functions; alarms memory reset; input hold function.

The instrument can have up to 4 relay (3A/250V) or logic (12Vdc, 20mA) outputs and up to 2 isolated analogue outputs in voltage or current.

The function of each output is completely configurable by faceplate.

The available functions include: control output, alarm output, timer, digital input repetition, retransmission of process value, setpoints, deviation, alarm setpoint or value read from digital communication. A further isolated output (10 or 24Vdc, 30mA max.) is available for powering external transmitters or potentiometers.

The serial communication interface RS485 (RS232C compatible) makes it possible to read or modify any parameter and to govern the instrument online (local/remote manual/automatic commutation, internal timer control, direct control of outputs).

Protocols available: MODBUS RTU and CENCAL (Gefran).

The optional serial communications can be Current Loop, RS232 or RS485, while the protocol can be selected between Gefran (Cencal) and Modbus. Using these it is possible to write to any of the instrument parameters.

All the programming procedures of the instrument are facilitated by the grouping of the parameters in function blocks (CFG for the control parameters, Inp for the inputs, Out for the outputs, etc.) and by the possibility of selecting a simplified menu for entering the most frequently used parameters.

To simplify the configuration even further, a programming kit is available for PC, which includes a menu driven configuration program for Windows and the necessary cable to connect the instrument (see data sheet code WINSTRUM).
**FACEPLATE DESCRIPTION**

A - Indication of process variable (PV), green digits h. 10mm
B - Indication of the set point (SV) green digits h. 7mm
C - “Function” key
D - “Lower” key
E - “Raise” key
F - Auto/Man selection
G - Function indication, red led
H - Indication of active outputs, red led

IP65 faceplate protection
DIMENSIONS AND CUT OUT

Dimensions: 48x48mm (1/16DIN) depth 129mm

CONNECTION DIAGRAM

(*) COM is on terminal 7 for output OUT4, continuous-type (W1).
   COM is on terminal 11 for output OUT4, relay- or logic-type

⚠️ Apply users’ manual warnings for a correct installation
The instrument conforms to the European Directives 2004/108/CE and 2006/95/CE with reference to the generic standards:
EN 61000-6-2 (immunity in industrial environment) EN 61000-6-3 (emission in residential environment) - EN 61010-1 (safety)

**C - TICK**

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

Please, contact GEFRAN sales people for the codes availability.