Main applications

- Extrusion lines and injection presses for plastics
- Filling machines
- Food processing plants
- Pressure measurement and trip points (direct/differential)
- Position measurement and trip points
- Variable setpoints in fast processes and automations in general, with signal retransmission

Main characteristics

- Double configurable input for strain gauge / potentiometer / linear signal / TC / RTD
- Two auxiliary analog inputs
- Differential measurement
- High precision: 0.1 % f.s. ±1 digit
- High tripping speed
- Automatic calibration for 6-wire strain gauge
- Transmitter power supply and strain gauge probe power supply
- Memory: min. peak, max. peak, max. peak – min. peak
- 3 configurable alarms, failsafe function
- 2 digital inputs
- up to 4 relay/logic outputs
- 5-digit display
- Serial communication interface: - RS485/RS232 MODBUS RTU protocol (optional)
  - Profibus DP slave (optional)
- Isolated analog retransmission output (optional)

PROFILE

Fast microprocessor display / alarm unit, 96 x 48 (1/8 DIN) format. Built with SMT technology for an extremely complete operator interface with IP54 protection level (IP65 with protective cover).

The front panel has a 6-key soft-touch keyboard and 5-digit LED display of process variable and parameters. The instrument is appropriate for acquisition of signals with high variation speed. It has two main analog inputs for many applications, including differential measurements.

The inputs are configurable from the keyboard and accept standard linear signals (and custom linearized signals), as well as signals from pressure probes, load cells, potentiometers, TC, RTD.

There are two additional analog inputs for linear signals and two digital inputs for functions such as alarm latch reset, peak latch reset, calibration check, hold, alarm setpoint selection.

The outputs (up to 4) are relay or logic, and are configurable. The instrument manages functions such as storage of maximum peak, minimum peak, peak-peak values.

An optional, optically isolated analog output is available for retransmission of input value or peak values.

Alarms

4 (10) completely configurable setpoints. Selectable “failsafe” function.

MD8 expansion to replace outputs 3 and 4, with 8 additional setpoints.

Digital communication

The instrument offers an optional RS485 2/4 wire / RS232 serial interface with MODBUS RTU protocol for access to instrument parameters, or the option Profibus DP (slave).

Configuration

The programming procedure is facilitated by the menu structure, with various configuration levels for quick and simple data search.

TECHNICAL DATA

OPERATOR INTERFACE

Display

Configurable from -99999 to 99999 with settable decimal point
5 digits bicolors (R/V) 13mm
2 digits (V) 7mm

LED signals: n.14 red

Keys: n.8

ANALOG INPUTS

Accuracy: 0.1% f.s. ± 1 digit (0.2% for TC)

Min. sampling time: 2 msec for main inputs
10msec for auxiliary inputs

Resolution:

- without filter: 100000 steps@2msec
- with digital filter (selectable): 100000 steps@20msec
  100000 steps@100msec (50Hz)

Custom linearization:

- fixed intervals: 64 sections
- variable intervals: 32 sections max.
- self-learning

INPUT 1, INPUT 2 main inputs

Strain-gauge: 350Ω

Sensitivity 1.5...4mV/V

Jumper power supply: 5/10Vdc 200mA

Potentiometer:

≥100Ω. Ri > 10MΩ @ 2.5Vdc

Linear DC:

±50mV ... ±10V, Ri > 1MΩ
0/4...20mA, Ri = 50Ω
TC - thermocouple:
J 0...1000°C / 32...1832°F
K 0...1300°C / 32...2372°F
R 0...1750°C / 32...3182°F
S 0...1750°C / 32...3182°F
T -200...400°C / -328...752°F
custom -1999...9999°F

RTD: 2-3 wires
PT100 -200...850°C / -328...1562°F
int./ext. cold junction compensation

INPUT 3 (auxiliary)
Linear DC:
0...10V, 0/4...20mA, Ri = 50Ω

INPUT 4 (auxiliary)
Linear DC:
0...10V, 0/4...20mA, Ri = 50Ω

ALARM
Relay: 5A/250Vac cosϕ=1
Logic: 24Vdc source/sink

OUTPUT 1
Relay (NO/NC)* or Logic
(according to model)

OUTPUT 2
Relay (NO/NC)* or Logic
(according to model)

OUTPUT 3**
Relay (NO/NC)* or Logic
(according to model)

OUTPUT 4**
Relay (NO/NC)* or Logic
(according to model)

* terminal °C in common
** alternate: version only with OUTPUT3
(switching contact) and interface for MD8
expansion unit

- The relay can be energized or de-ener-
gized in alarm state (selection via key-
board).

POWER SUPPLY
100...240Vac/dc ±10%,
20...27Vac/dc ±10%,
50...60Hz: max 20VA
Protection via internal fuse, not replaceable
by operator

PROBE POWER SUPPLY
5/10Vdc - 200mA, 2.5Vdc for potentiome-
ters

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

WEIGHT
450g

DIMENSION
96 X 48 X 167 mm

ACCESSORIES
MD8 - EXPANSION UNIT
replaces outputs 3 and 4 with an additio-
al 8 outputs (relay or logic, according to
model)

WINSTRUM KIT
TTL/RS232 interface wires + CD

DESCRIPTION FACEPLATE

A - Process variable display, digit height 14mm, red
B - Index value for displayed process variable
C - "FUNCTION" button
D - "LOWER" button
E - "RAISE" button
F - special functions
G - "CAL-RST" button
H - "PEAK" button
I - Alarm setpoint signals, red LEDs
L - Function indicators

IP54 front panel protection (IP65 available)
Apply user’s manual warnings for a correct installation.
**DIMENSIONS AND CUT OUT**

Dimensions: 96x48mm (1/8 DIN), depth 167mm

**ORDER CODE**

Please, contact GEFRAN sales people for the codes availability.

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

Conformity C/UL/US File no. E216851

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)