C 95 CI
Digital Panel Meter
Integrator/Totalizer

- Display: ±100 000 pts for the instant value and on 6 digits for the integrator
- One bi-directional DC current or voltage input ±100mV, ±1V, ±10V, ±300V, ±20mA.
- Linear input with or without square root extraction and special curve in 20 points (programming in X and Y)
- Supply for 2 or 3 wire sensor
  26 Vdc / 100 mA
- Integrator function with time basis and programmable conversion factor
- Totalizer saving in case of power supply cut
- Bargraph enables quick visualising of the instant or cumulated value, independently from display

### Input Features

**Current or voltage input**
- Bi-directional ±100mV, ±1V, ±10V, ±300V, ±20mA.
- Accuracy 0.05 % of full scale at +25 °C
- Thermic drift < 150 ppm/°C.
- Scale overlapping measurable from -5% to +5%.
- Programmable scale factor
- Enlarging effect - Square root extraction
- Special linearisation 20 points.
- Supply for 2 or 3 wire sensor (current input)
  26 VDC (±15%) - 25 mA protected from short-circuits.

**LOGIC:** 2 insulated LOGIC inputs
- Display blocking
- Totalizer zero reset / Integration stop and start
- Tare function
- Min. and max. zero reset
- Display change

### Outputs Features

**Analogue output:**
- Active current output 0/4-20mA
- Accuracy 0.1 % in relation to display (at +25°C)
- Residual drift ≤ 0,2%
- Admissible load: 0 Ω < Rc < 500 Ω (current)
  Rc > 2 kΩ (voltage)
- Programmable scale ratio with enlarging effect on the instant or cumulated value
- Response time : 40 ms

**Relay output**
- NO-NC contact 8 A...250 V on resistive load
- Independently programmable
- Mode pulses : duration 100, 200, ou 400 ms; pulse weight adjustable from 1 to 10 000
- Mode alarm : set-point or window on the instant or cumulated value
- Hysteresis programmable in the display unit
- Time delay programmable from 0 to 25 s. in 0.1s increases

**Digital output**
- Data link RS485 (2 wires)
- Protocols MODBUS–JBUS data format:
  - integer / double integer
- Slave number programmable from 1 to 255 with a rate from 1200 to 19200 Bauds
### Technical data

#### Display
- Instant value on 5 digits (14 mm), ±100 000 points
- Cumulated value on 6 digits (14 mm), from -100 000 to +1 000 000 points associated with a counter of overstepping (±1000) for a maximum counting from -100 000 000 to +1 000 000 000 points.
- Led indicating the type of value on display.

#### Features
- **Sampling time**: 100 ms, 20 ms, 16.6 ms
- **Input impedance**: ≥1 MΩ for voltage inputs
- **Drop**: 0.9 V max. for current input
- **Rejection rate**
  - Common mode: 130 dB
  - Mode series: 70 dB 50/60 Hz
- **Insulation**
  - Inputs / Power Supply: 2.5 kV eff. 50Hz-1min
  - Input / Output: 2.5 kV eff. 50Hz-1min
- **Zero drift compensation and self-calibration**
- **Measurement filtering**
  - Programmable integration indices: allows display stabilising in case of unsteady input.
- **Sensor or line rupture detection**
  - Can be detected on inputs mV and current (4...20 mA).
  - Return value programmable on the analogue output in case of sensor rupture
  - Sensor rupture detection programmable on the relays
  - Possibility to disconnect sensor rupture (mV)
- **Self diagnosis**
  - Permanently watches any component drift that may surge
  - Serves to warn the user before they provoke false measures
  - Self diagnosis error detection programmable on the relays
  - Return value programmable on the analogue output in case of error self-diagnosis
- **Input scale overlapping**
  - Visualised on the display by a blinking measure
- **Linearisation**
  - Linear input
  - Square root extraction
  - Special linearisation on 20 points (in X and in Y)
  - Programmable cut-off
- **Shifted scale** (inclination and offset)
  - Programmable on all inputs
- **Bargraph** (16 LEDs)
  - Programmable
  - Fast visualising of instant or cumulated value, independently from display, or visualising of the various functions (overstepping, logic, RS, etc...)
- **Brightness**
  - Programmable: 4 levels
  - According to instrument location (outside, control room...)
- **Totalling**
  - Totalling on a 6-digit meter associated with a second 3-digit meter allowing totalling from -99 999 999 to 999 999 999.
  - Saving of meters in case of power supply cut
  - Programming of the integration time (sec/min/hour) and of a conversion coefficient (from 0.0001 to 999 999)
  - Possibility to record the input failures, or not (electrical overstepping, sensor ruptures)
- **Inputs**
  - **Current or voltage input**
    - Bidirectionnal ±100mV, ±1V, ±10V, ±300V, ±20mA
  - **LOGIC input**
    - 2 insulated LOGIC inputs with programmable functions
    - Totalizer zero reset, integration stop and start, changing of the value type on display.
    - Display holding, function tare, min. and max. zero reset
- **Outputs**
  - **Insulated analog output**
    - Programmable on the instant or cumulated value
    - Active current output
    - Scale ratio programmable with enlarging effect
    - Return value in case of sensor break and/or self-diagnosis error
    - 2 relays: Programmable as pulse output with adjustable weight and duration or as alarm with set-point or window mode programmable on 1 of the 2 measured values (instant or cumulated) with:
      - Recording of alarms
      - Time delay and hysteresis adjustable on each set-point
      - Messages associated with the alarms
  - **Insulated digital output**
    - RS 485 2 wires, protocol MODBUS-JBUS
### Connectors
Plug-off connectors on rear side for screwed connections (2.5mm², flexible or rigid)

### Fast reading on the display
- Set-point values
- Input signal electrical value
- Min. and max. values
- Overstepping counter

### Simulation function
Possible simulation of analog output (mode simulation).
Simulation of instant or cumulated measure possible: allows validation of the analog output and relay outputs configuration in the system.

### Power supply
- **High Voltage**: 90...270 VAC 50/60/400 Hz; 88...350 VDC
- **Low Voltage**: 20...53 VAC 50/60/400 Hz; 20...75 VDC

### Power draw
7 W max. 10 VA max.

### Protection
- **Front face**: IP 65
- **Case/terminals**: IP 20

### Standards
- Complies with standards on emission and on immunity in industri. environment: EN 50081-2; EN 50082-2
- EN 61000-4-2 level 3, EN 61000-4-3 level 3, EN 61000-4-4 level 4, EN 61000-4-6 level 3
- CE: Marked according to directive CEM 89-336

### Environment
- **Front face protection**: IP 65
- **Operating temperature**: -5...55°C
- **Storage temperature**: -30°C...+80°C
- **Relative dampness**: 80% annual average
- **Weight with / without output board**: 250g / 150g
- Connection with screwed plug-off connectors (for 2.5 mm² cable, flexible or rigid).
- Case in self-extinguishing black UL 94 V0 ABS

### Dimensions
- **Case**: 96 x 48 x 124 mm (including terminals)

### Electrical connections
**Locations of terminals (view of case rear side)**

- **A**: Process input
- **B**: option N (Digital)
- **C**: option A1, A2, A3 (Logic input) or option active current
- **D**: option R (2 Relays)
- **E**: option E (Logic)

---

**Mounting**: on panel; cut out 44 x 91 mm
Access code
An access code settable from 00000 to 59999 prevents unauthorised programming of indicator, set-points and locks access to some functions. The factory code is 00000.

- 0 - 5 Access to shifted scales
- 6 - 9 No access
- 0 - 5 Access to measure and output simulations
- 6 - 9 No access
- 0 - 5 Access to function "tare"
- 6 - 9 No access
- 0 - 5 Access to fast entering of alarm set-points
- 6 - 9 No access
- 0 - 2 Access to totalizer zero reset menu
- 3 - 5 No access

Codification

Output options:
A: Analog
R: 2 relays
N: Digital link (RS 485 2 wires)
tor: 2 LOGIC inputs

Type of power supply
2: High Voltage
3: Low Voltage

C 95 CI