

C 95 CI

Digital Panel Meter

Integrator/Totalizer



- Display : $\pm 100\,000$ pts for the instant value and on 6 digits for the integrator
- One bi-directional DC current or voltage input $\pm 100\text{mV}$, $\pm 1\text{V}$, $\pm 10\text{V}$, $\pm 300\text{V}$, $\pm 20\text{mA}$.
- 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
<p>Current or voltage input Bi-directional $\pm 100\text{mV}$, $\pm 1\text{V}$, $\pm 10\text{V}$, $\pm 300\text{V}$, $\pm 20\text{mA}$.</p>	<ul style="list-style-type: none"> • Accuracy 0.05 % of full scale at $+25\text{ }^\circ\text{C}$ • Thermic drift $< 150\text{ ppm}/^\circ\text{C}$. • 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 ($\pm 15\%$) -25 mA protected from short-circuits.
<p>LOGIC: 2 insulated LOGIC inputs</p>	<ul style="list-style-type: none"> • Display blocking • Totalizer zero reset / Integration stop and start • Tare function • Min. and max. zero reset • Display change
Outputs	Features
<p>Analogue output: A: Active current output 0/4-20mA</p>	<ul style="list-style-type: none"> • Accuracy 0.1 % in relation to display (at $+25\text{ }^\circ\text{C}$) • Residual drift $\leq 0,2\%$ • Admissible load: $0\ \Omega < R_c < 500\ \Omega$ (current) $R_c > 2\ \text{k}\Omega$ (voltage) • Programmable scale ratio with enlarging effect on the instant or cumulated value • Response time : 40 ms
<p>Relay output R: 2 relays</p>	<ul style="list-style-type: none"> • 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
<p>Digital output N: Data link RS485 (2 wires)</p>	<ul style="list-style-type: none"> • 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), $\pm 100\,000$ 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	$\geq 1\text{ M}\Omega$ 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	
Measure 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 $\pm 100\text{mV}$, $\pm 1\text{V}$, $\pm 10\text{V}$, $\pm 300\text{V}$, $\pm 20\text{mA}$
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
Relays output	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

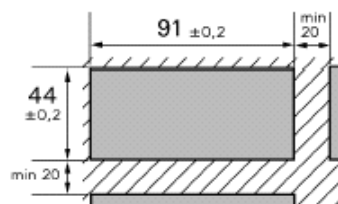
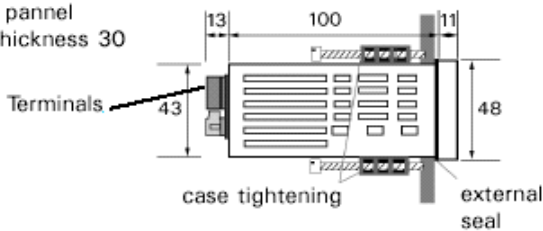
Connectors	Plug-off connectors on rear side for screwed connections (2.5mm ² , flexible or rigid)
Fast reading on the display	Set-point values Input signal electrical value Min. and max. values Overstepping counter
Simulation function	Possible simulation of analog output (mode simulation). Simulation 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 industr. 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 mm ² cable, flexible or rigid).	
Case in self-extinguishing black UL 94 V0 ABS	

Dimensions

Case : 96 x 48 x 124 mm (including terminals)

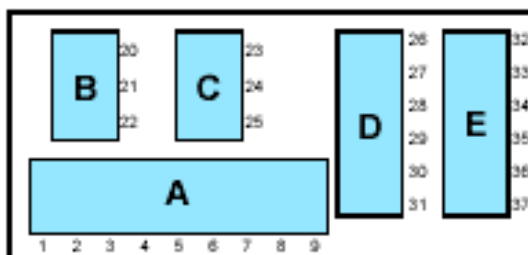
Mounting : on pannel;
cut out 44 x 91 mm

Fitting pannel
max. thickness 30



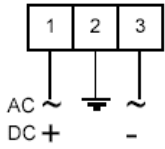
Electrical connections

Locations of terminals (view of case rear side)

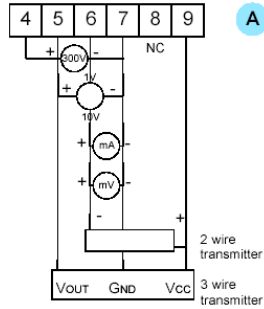


- A: Process input
- B: option N (Digital)
- C: option A1, A2, A3 (Logic input) or option active current
- D: option R (2 Relays)
- E: option E(Logic):

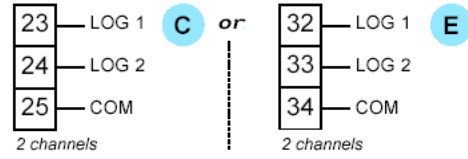
Power supply



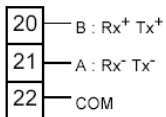
Process input



Logic inputs

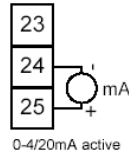


Digital

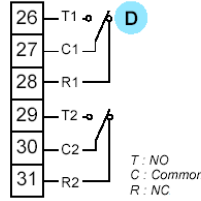


Data link RS 485

Active current



2 Relays



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.

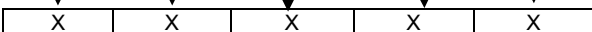
- 0 - 5 Access to shifted scales
- 6 - 9 No access

- 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



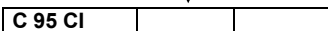
Codification

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



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