

MICRO-CALCULATOR FOR ANALOG SIGNALS



μCAL

- 3 inputs isolated from one another (250 V), programmable as current or voltage input: 0-20 mA, ±20 mA, 0-10 V, ±10 V
- Calculation on 1, 2 or 3 inputs: +, -, x, /, >, <, sin, cos, ...
- Function integration on the calculation
- Special linearisation in 20 pts on each channel
- Supply for 19 V 60 mA sensor
- Isolated analog output, current or voltage (specify)
- 2 relay outputs (1NO 5A / 250 Vac)

- Universal power supply: 20 to 270 Vac and 20 to 300 Vdc
- Response time: 150 to 350 ms

Sensor break detection.

Isolation between input / outputs / supply.

Self-diagnosis

Mode gene: the analog output is piloted locally by the micro-console.

Function simulation of the display

Easy programming on front face with the LCD μconsole, or by the PC software SuperVISION (ARDETEM) or MCvision (SFERE).

Programming with the LCD μconsole

This miniaturised micro-console for clipping on the front face of the instruments:

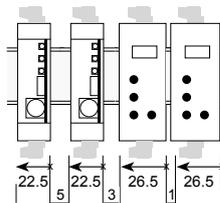
- the visualisation of the 3 measure channels, the calculation or the totaller and the status of the analog and relay outputs,
- the visualisation and the modification of the programming,
- the teleloading of programming files for duplication to other calculators.

Programming by PC: SuperVISION/MCvision

Programming software (Windows environment) allowing:

- the storage of configurations as files which can be consulted, modified, duplicated or loaded into the calculators,
- the edition and printing of files with or without a calculator connected.

- Protection: Case / terminals = IP20
- Plug-off connectors for screwed connections (2.5 mm², flexible or rigid)
- Weight: 240 g (with packaging)
- Self-extinguishing case of black UL 94VO ABS.
- Mounting in switchbox: latching on symmetrical DIN rail.

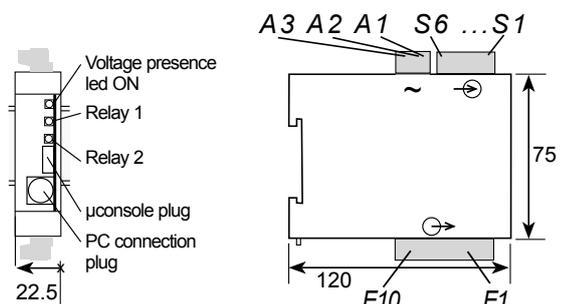


Dimensions: 22.5x75x120 mm
with μconsole: 26.5x80x130 mm

To allow the inserting of the μconsole: mount the instruments vertically (on horizontal DIN rail), leaving a 5mm space between each.

Operating T°: -10 to 50 °C
Storage T°: -20 to 70 °C

Dimensions



◆ Disturbance immunity according to the standard IEC 61000-6-2(IEC 61000-4-3 level 3, IEC 61000-4-4 level 4, IEC 61000-4-6 level 3)



Features

Inputs

Types of INPUTS	Measure range adjustable from:	Permanent overload	Intrinsic error	Console resolution	Input impedance
mA	±22 mA or -2 to +22 mA	±100 mA	<	10 µA	100 Ω
V	±11 V or -1 to +11 V	± 50 V	±0.05% of the MR	1 mV	500 KΩ
Supply for 2-wire sensor	19 V ±15% 60 mA*				
Special linearisation programming up to 20 points	on the 3 inputs				

MR : measure range

* The distribution of the sensor supply to 2 or 3 inputs suppresses the isolation between these 2 or 3 inputs.

- Scale factor, cut off, filter, unit independently programmable on each input.
- Programmable sampling time: 20 ms or 100 ms, for each channel.
- Calculation possible from 1, 2 or 3 variables using constants mathematical functions and intermediate calculations.
- 10 constants or coefficients programmable from ±0.001 to ±9999 + constant π .
- Functions: $\sqrt{\quad}$, Sin, Cos, Tgt, Ctg, decimal logarithm., napierian logarithm, exponential, absolute value, reverse.
- 6 operators: summ, subtraction, multiplication, division, upper, lower.
- 5 intermediate registers + 1 final register.
- Function integration on the calculation with programmable time basis and saving of the totaller.
- Thermal drift < 150 ppm/°C.

Outputs

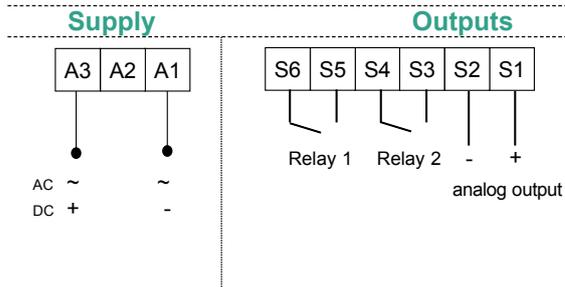
Code	Types of OUTPUTS		Features
A	1 analog	Current	Programmable on 1 input, on the calculation or the totaller Current: direct or reversed 0-20 mA Load impedance ≤ Lr 600 Ω
		Voltage	Voltage: direct or reversed 0-10 V Load impedance ≥ Lr 500 kΩ
R	2 relays (1NO) alarm or pulses		2 setpoint per relay, configurable on 1 input, on the calculation or the totaller. Hysteresis programmable from 0 to 100%. Time delay programmable from 0 to 25 sec. (5A/250 VAC on resistive load)
Use as pulse output or in mode totaller			

Galvanic partition:

2 kV - 50 Hz - 1 min. between supply, input, analog output, relay outputs

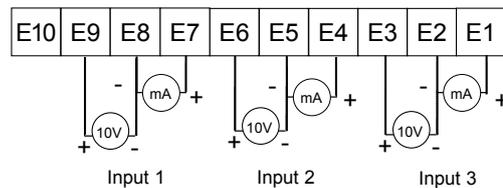
Wiring

Upper connectors

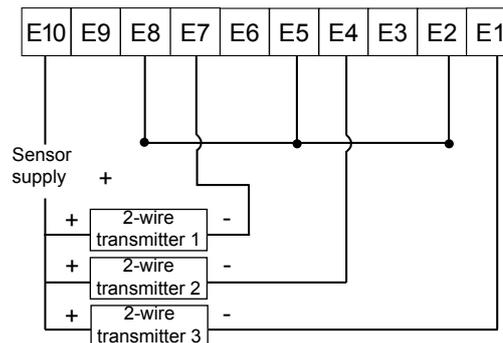


Lower connector

Inputs

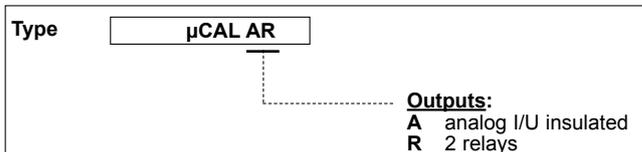


Inputs 2-wire transmitters



* The distribution of the sensor supply to 2 or 3 inputs suppresses the isolation between these 2 or 3 inputs.

Coding



Power supply:

20 to 270 VAC 50/60/400 Hz and 20 to 300 Vdc

Power draw : 3.5 W max. 6.5 VA max.
Dielectric withstanding: 2 kV - 50 Hz - 1 min.

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