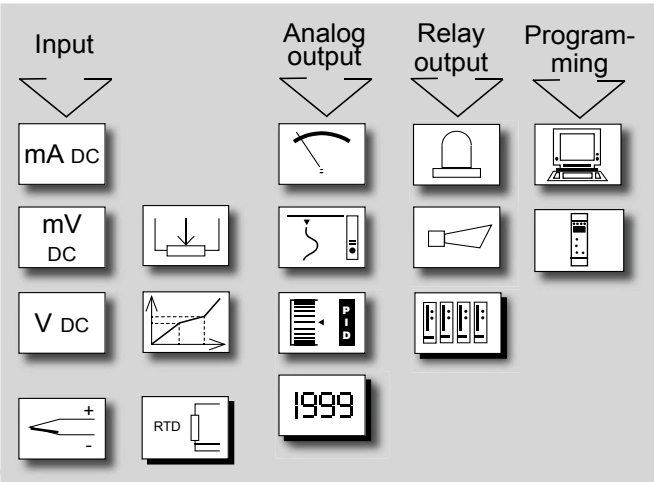


# PROGRAMMABLE CONVERTER

## µC 10



Easy programming on front face with a micro-console or by the PC software MCVision.

### Programming with the Micro-console

The series µC accepts 2 types of µconsoles :

- The old generation with 4 electroluminescent alphanumerical green digits
- The new generation with graphical rear-lit LCD

The LCD allows visualising 4 pieces of information:

- the value of the measure,
- the unit of the displayed value,
- the value of the analog output or the marking name of the product,
- the status of the relay outputs.

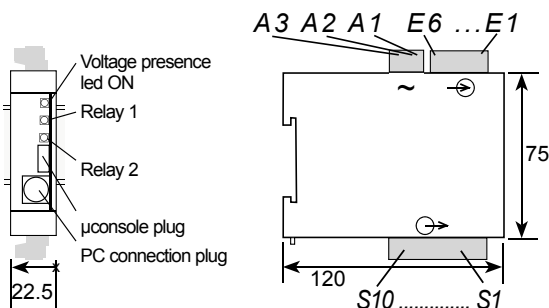
This µconsole with LCD also allows the display of this information either vertically or horizontally, according to the sense in which the converter is mounted.

### Programming by PC: MCVision

Programming software (Windows environment) allowing:

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

## Dimensions



- **Universal power supply:**  
20 to 270 Vac and 20 to 300 Vdc

- **Universal input:**

100mV, 1V, 10V, 300V,  
20mA, Pt100 3 wire, Ni 100, thermocouple,  
resistance and potentiometer.  
Typical response time: 300 ms

- Supply for 2-wire sensor

- **1 insulated analog output (A)**, programmable in 0-4-20mA current (active/passive) or in 0-10V voltage.

**Relay outputs** (option R) : 2 inverting relays (8A/250 VAC on resistive load).

*Detection of the sensor rupture.*

*Insulation between input/outputs/supply.  
Self-zero and self-diagnosis.*

*Mode driver: the analog output is piloted by the micro-console.*

*Function simulation of the input measure.*

*Programming either with the micro-console or by PC via the software MCVision.*

Self-extinguishing case of black UL 94VO ABS.  
Mounting in switchbox: latching on symmetrical DIN rail.

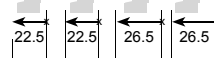
*Rack version: consult.*

Plug-off connectors for screwed connectings (2.5mm<sup>2</sup>, flexible or rigid)

Weight: 240g (with packaging)

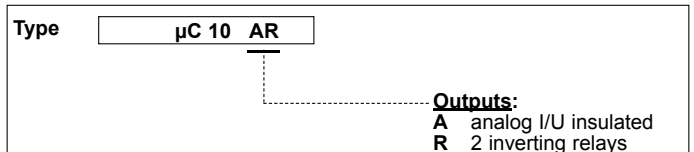
Dimensions : 22.5x75x120 mm  
with µconsole : 26.5x80x130 mm

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



- ♦ **CE** according to IEC 61000-6-4, IEC 61000-6-2 (industrial environment).
- ♦ 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)

## Coding



### Supply:

**20 to 270 VAC and 20 to 300 Vdc**

Power draw : 3 W max. 5 VA max.  
Dielectric withstanding : 2 kV-50Hz-1min.

*Order example: For a converter with universal input + analog output + 2 relays, request reference µC 10 AR.*



**CONVERTERS**



CA  
CO/81

# Features

## Inputs

Types of INPUTS	Measure range adjustable from:		Permanent overload	Intrinsic error	Console resolution	Input impedance	
mA $\blacktriangle$	-2 to +22mA		$\pm 100$ mA	$< \pm 0.05\%$ of the MR (3)	10 $\mu$ A	Max. drop 0.9V	
mV $\blacktriangle$	-10 to +110mV		$\pm 1$ V		10 $\mu$ V		
V $\blacktriangle$	-0.1 to +1.1V		$\pm 50$ V		1 mV	$\geq 1$ M $\Omega$	
	-1 to +11V			10mV			
	-30 to +330V		$\pm 600$ V				
Thermocouples $\blacktriangle$ Standard IEC 581	$^{\circ}$ C	$^{\circ}$ F	-	$< \pm 0.1\%$ of the MR $\blacklozenge$ (2)	0.1 $^{\circ}$ C / 0.1 $^{\circ}$ F	$\geq 1$ M $\Omega$	
	J	-160/1200					-256/2192
	K	-270/1370					-454/2498
	B	200/1820					392/3308
	R	-50/1770					-58/3218
	S	-50/1770					-58/3218
	T	-270/410					-454/770
	E	-120/1000					-184/1832
	N	0/1300					-32/2372
	L	-150/910					-238/1670
	WV	1000/2300					1832/4172
	WV3	0/2480					32/4496
	WRE5	0/2300					32/4172
Sensor Pt100 $\Omega$ (1) $\blacktriangle$ 3 wire, Stand. IEC 751 (DIN 43760)	$^{\circ}$ C	$^{\circ}$ F	-	$< \pm 0.1\%$ of the MR	0.1 $^{\circ}$ C / 0.1 $^{\circ}$ F	Current 250 $\mu$ A	
Sensor Ni 100 3 wire(1) $\blacktriangle$	-60/260	-76/500	-				
Resistive sensors	Calibers 0-440 $\Omega$ and 0-2.2 k $\Omega$ $\blacktriangle$ (0-8.8 k $\Omega$ optional)		-	$< \pm 0.1\%$ of the MR (0.5% for 0-2K $\Omega$ )			
Potentiometer	from 100 $\Omega$ to 10 k $\Omega$ $\blacktriangle$		-				
Supply for 2-wire sensor	24 Vcc $\pm 15\%$ with protection from short-circuits. 25 mA max. -						
Special linearisation programming up to 20 points	On input: mV, V, mA. Resistive sensors and potentiometer						

- (1) Line resistance <25 $\Omega$   
 (2) Or 30  $\mu$ V typical (60 $\mu$ V Max.)  
 $\blacktriangle$  CJC efficiency:  $\pm 0.03^{\circ}$ C/ $^{\circ}$ C  $\pm 0.5^{\circ}$ C from -5 $^{\circ}$ C to +55 $^{\circ}$ C  
 MR Measure range

$\blacktriangle$  A 12  $\mu$ A pulsed current allows the detection of line or sensor rupture.  
 $\blacklozenge$  Cut off : the console display and the output of the  $\mu$ C remain at down scale for an input signal < than the cut off value, programmable from 0% to 100% of the input scale.  
 Thermic drift <150ppm / $^{\circ}$ C

## Outputs

Code	Types of OUTPUTS		Features
A	1 analog	Active/passive current Voltage	Current: direct or reversed 0-20mA Load impedance $\leq$ Lr 600 $\Omega$  Voltage: direct or reversed 0-10V Load impedance $\geq$ Lr 5000 $\Omega$
R	2 inverting relays		2 setpoints per relay, configurable on the whole MR. Hysteresis programmable from 0 to 100%. Time delay programmable from 0 to 25 sec. (8A/250VAC on resistive load)

Typical response time: 300 ms (for a variation from 0 to 90 % of the input signal)

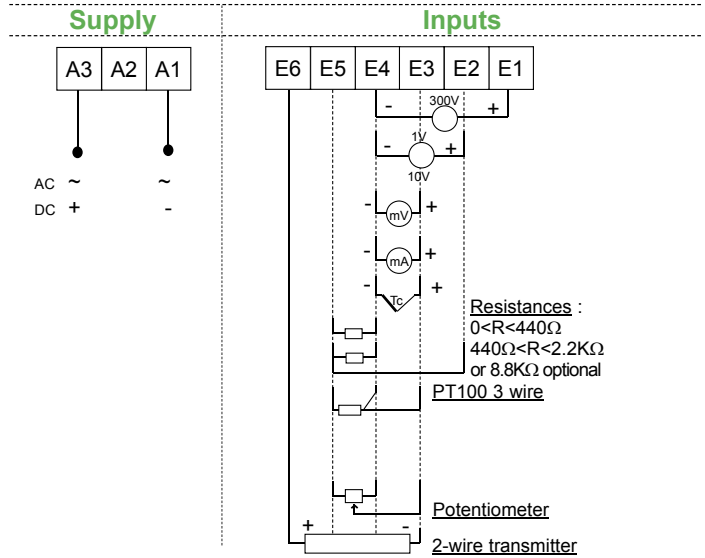
Add 40ms for the response time on the analog output.

## Galvanic partition:

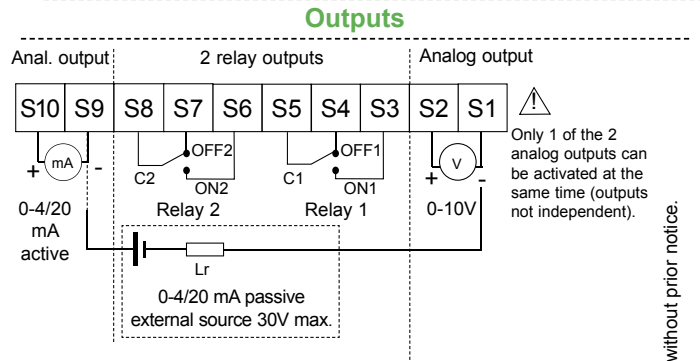
2kV-50Hz-1min. between supply, input, analog output, relay outputs

# Wiring

## Upper connectors



## Lower connector



SFERE - CA CO/81 H 11/06 - Any data in this documentation may be modified without prior notice.

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Your representative