

MEASURE CONVERTERS

WITH DISPLAY, UNIVERSAL, PROGRAMMABLE

Series μ C: μ C 305U, μ C 405U, μ C 805U

Features

- **Universal power supply:**
20 to 270 Vac and 20 to 300 Vdc
- **Universal input:**
 $\pm 100\text{mV}$, $\pm 1\text{V}$, $\pm 10\text{V}$, $\pm 300\text{V}$, $\pm 20\text{mA}$, Pt100 3 wire, Ni 100, Δ Pt100, thermocouple, resistance and potentiometer.
- Average response time: 150ms
- Supply for 2-wire sensor
- **Insulated analog output (A)**
0-4-20mA (active/passive) current or 0-10V voltage.
- **4 relay outputs (R4):**
(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.

Type:

μ C 305U: 1 analog output

μ C 405U: 4 relays

μ C 805U: 1 analog output
+ 4 relays

Configuration

Easy programming on front face with the micro-console keyboard or with the PC software MCVISION.

Programming with the Micro-console

The series μ C accepts 2 types of μ consoles:

- The old generation with 4 alphanumerical electroluminescent 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 measure,
- the value of the analog output or the marking name of the product,
- the status of the relay outputs.

This μ console with LCD also allows displaying these information either vertically or horizontally, according to the sense in which the converter is mounted.

Programming by PC: MCVision

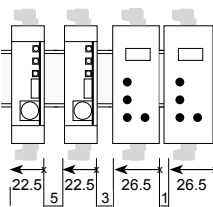
Programming software (Windows environment) allows:

- 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.

Protection: case / terminals: IP 20

Plug-off connectors for screwed connectings
(2.5 mm², flexible or rigid)

- Weight: 240g (with packaging)
- Self-extinguishing case of black UL 94VO ABS.
- Mounting in switchbox: latching on symmetrical DIN rail.
- Rack version: consult.



Dimensions: 22.5x75x120 mm
with μ console: 26.5x80x130 mm

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

• **CE** according to the directive EMC 2004/108/CE.

Conform with standards:

- IEC 61000-6-4 on emissions, IEC 61000-6-2 immunity (industrial environment)
- IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-6 (level 3)
- Sensitiveness < $\pm 1\%$ of the measure range

Coding

Type **μ C 305U**

Universal inputs

Outputs:

- μ C 305U: 1 analog
- μ C 405U: 4 relays
- μ C 805U: 1 analog, 4 relays

- For the μ C 805U, the type of the analog output (mA or V) must be specified on order.

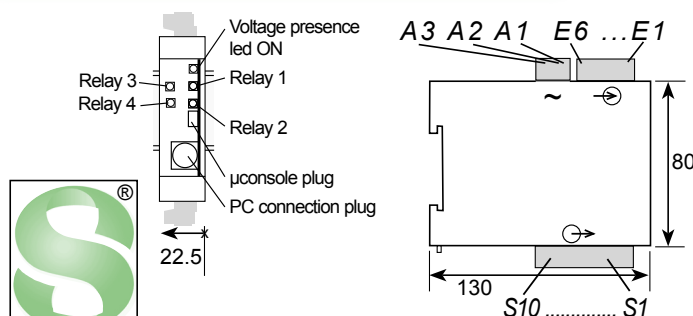
Power supply: 20 to 270 Vac and 20 to 300Vdc

Power draw: 3 W max. 5.5 VA max.

Dielectric withstanding: 2 kV-50Hz-1min.

• **Order example:** For a converter with universal input + 1 analog output + 4 relays, powered in 230 V, request reference **μ C 805U**

Dimensions



The friendly interface



Features

Inputs

Types of INPUTS	Measure range adjustable from:		Permanent overload	Intrinsic error	Console resolution	Input impedance
mA	-22 to +22mA with $\sqrt{\text{ }}$ ♣		±100mA	< ±0.05% of the MR	10 µA	0.9V max. drop
mV♣	-110 to +110mV with $\sqrt{\text{ }}$ ♣		±1V		10 µV	≥ 1MΩ
V	- 1.1 to +1.1V with $\sqrt{\text{ }}$ ♣		±50V		1 mV	
	-11 to +11V with $\sqrt{\text{ }}$ ♣				1 mV	
	-330 to +330V with $\sqrt{\text{ }}$ ♣		±600V		10mV	
Thermocouples ♣ Standard IEC 581	°C	°F	-	♣(2) <±0.1% of the MR	0.1°C / 0.1°F	≥ 1 MΩ
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				
W	1000/2300	1832/4172				
W3	0/2480	32/4496				
WRE5	0/2300	32/4172				
Sensor Pt100Ω (1)♣ 3 wire, Standard IEC 751 (DIN 43760)	°C	°F	-	<±0.1% of the MR	0.1°C / 0.1°F	Current 250µA
	-200/850	-328/1562				
Sensor Ni 100 3 wire (1)♣	-60/260	-76/500				
Differential measures from 2 sensors Pt100Ω 2 wire Standard IEC 751 ♣**	-200/270	-328/518	-			
Resistive sensors	Calibers 0-440 Ω and 0-2.2 kΩ ♣ (0-8.8 kΩ optional)		-	<±0.1% of the MR (0.5% for 0-2KΩ)		-
Potentiometer	from 100Ω to 10 kΩ ♣		-			
Supply for 2-wire sensor	24 Vdc ±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 μV typical (60 μV Max.)
 $\clubsuit$ CJC efficiency: $\pm 0.03^{\circ}\text{C}/^{\circ}\text{C} \pm 0.5^{\circ}\text{C}$
 from -5°C to $+55^{\circ}\text{C}$
 MR Measure range
 $\sqrt{\text{ }}$ Extraction of the square root
 $\clubsuit$ A 12 μA pulsed current allows the
 detection of line or sensor rupture

- $\clubsuit$ Cut off: the display of the console
 and the output of the μC remain at down
 scale for an input signal $<$ than the cut
 value, programmable from 0% to 100%
 of the input scale.
 Thermic drift $< 150\text{ppm}/^{\circ}\text{C}$
 $\clubsuit\clubsuit$ Line resistance $< 10\Omega$ and
 R. max. 400 Ω

Outputs

μC 350U	μC 805U	μC 405U	Types of OUTPUTS	Features
●	●		Analog insulated	Active/passive current
				Voltage
	●	●	4 relays with NO contact	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)

Response time of the outputs:

(for a variation from 0 to 90% of the input signal)

Average response time: 150 ms (1)

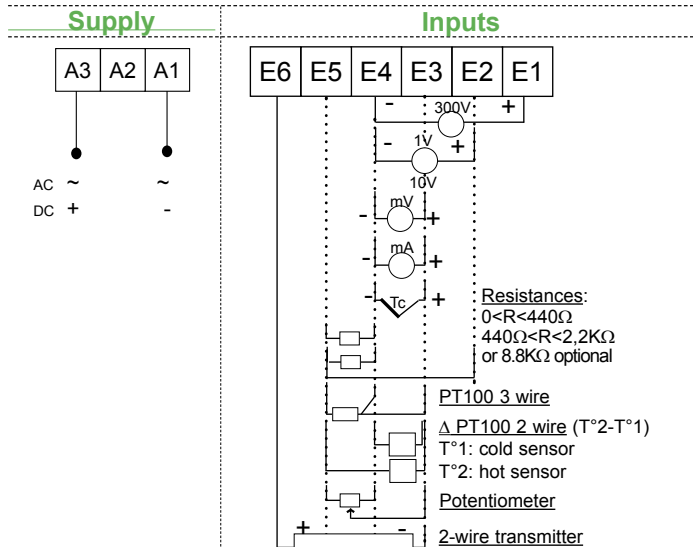
(1) Add 40 ms for the response time on the analog output

Galvanic partition:

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

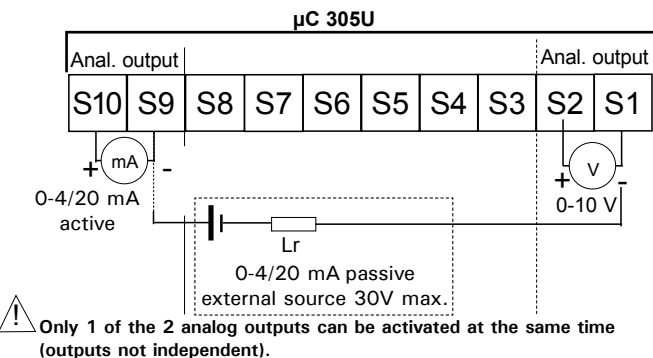
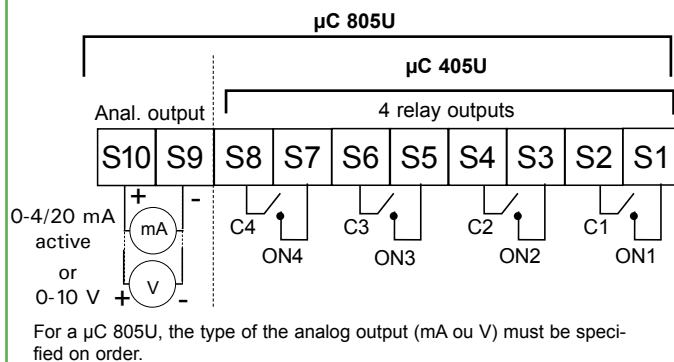
Wiring

Upper connectors



Lower connector

OUTPUTS



Only 1 of the 2 analog outputs can be activated at the same time (outputs not independent).

Your representative

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