



SETPOINT RELAYS WITH DISPLAY

μCv 305/405/805



Features

- **Universal power supply:**
20 to 250 Vac and 20 to 250 Vdc
- **Universal input:**
±100mV, ±1V, ±10V, ±270V, ±20mA, Pt100, Ni 100 (2, 3 or 4 wire), ΔPt100 thermocouple, resistance and potentiom.
- **Average response time:** 150ms (15ms for the version F)
- **Supply for 2-wire sensor**
- **Isolated analog output (A)**
0-4-20mA (active/passive) current or 0-10V voltage.

4 relay outputs (R4): 4 change-over relays (8A/250 VAC on resistive load).

Sensor break detection and self-diagnosis.

Isolation between input/outputs/supply. Mode simulation allowing to validate the configuration or the installation.

Programming either with the micro-console or with the PC software SlimSET via a standard USB / μUSB cable.



CONVERTERS

Configuration

Easy programming on front face with a micro-console or with the PC software SlimSET (via a standard USB/μUSB cable).

Programming with the Micro-console

The graphical rear-lit LCD with tactile keyboard allows to visualise the following information:

- the measured value with its unit,
- the value of the analog output,
- the product tag name,
- the status of the relay outputs.
- Scrolling message for programming help in various languages
- Passcode protected programming
- Programmable keys for direct access

Programming by PC: SlimSET

Programming software (Windows environment) allowing:
The storage of the 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 signal conditioner connected.

Features

Supply: 20 to 250 Vac and 20 to 250Vdc

Power draw: 2.6 W max. 8 VA max.

Dielectric withstanding: 3.0 kV-50Hz-1min.

Operating temperature: -20 to +60°C

Storage temperature: -20 to +70°C

Installation: Pollution degree 2 / voltage surge II

Protection: case / terminals: IP 20
Removable terminal blocks for screwed connections (2.5 mm², flexible or rigid)
Weight: 290g (with packaging)
Self-extinguishing case of black UL 94VO PA66.
Mounting in switchbox: latching on symmetrical DIN rail.

Compliance with standards:

Directive LV 2014/35/UE EN 61010-1
Standard for UL electrical safety UL 61010-1
..... CSA C22.2 NO.61010-1-12
Directive ATEX 2014/34/UE area 2 EN 60079-0
..... EN 60079-15
Directive EMC 2014/30/UE EN 61326-1

Marking:

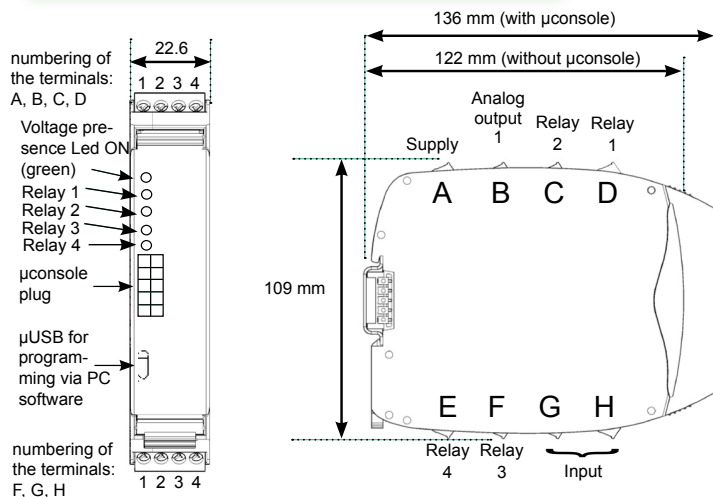


II 3 G Ex nA IIC T4 Gc

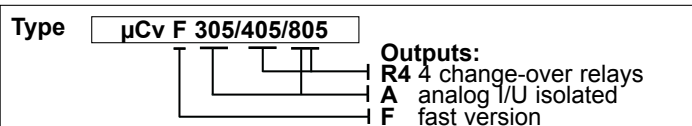


Process Control Equipment
E482453

Dimensions



Coding



Available versions:

μCv	305	405	805
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(consult with us for different configurations)

- Order example: For a converter with universal input + 1 analog output + 4 relays + micro console: reference **μCv 805**
- Standard programming cable USB type A male to μUSB type B male: reference **C1-μUSB**

- CJC terminal (option): reference **B1CSF-4**

Features

Inputs

Types of INPUTS	Measure range adjustable from:		Permanent overloas	Intrinsic error	Input impedance
mA(1)	-2 to +22mA (U) -22 to +22mA (B)		±100mA	< ±0.1% of the MR for inputs of the type (U)	Max. drop 0.9V
mV(1)	-10 to +110mV (U) -110 to +110mV (B)		±1V		≥ 1MΩ
V	-0.1 to +1.1V (U) -1.1 to +1.1 V (B)		±50V	< ±0.05% of the MR for inputs of the type (B) (4)	
	-1 to +11V (U) -11 to +11V (B)				
	-30 to +300V (U) -300 to +300V (B)		±300V		
Thermocouples(1) Standard IEC 581	°C	°F		<±0.1% ⁽³⁾ of the MR or 30µV typical (60µV max.)	≥ 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			
Pt100Ω sensor(1)(2) Standard IEC 751 (DIN 43760)	°C	°F	-	<±0.1% of the MR	Current 250µA
	-200/850	-328/1562	-		
Ni 100 sensor (1)(2)	-60/260	-76/500	-		
Differential measures from de 2 sensors Pt100Ω 2 wire Standard IEC 751 (1)	-200/270	-328/518	-		
Resistive sensors	Calibers 0-440 Ω(1)(2) and 0-10 kΩ		-	<±0.1% of the MR	Max. current 250µA
Potentiometer	from 100Ω to 10 kΩ		-		Max. voltage 100mV
2-wire sensor supply	24 Vdc ±15% with protection from short-circuits. 25 mA max.				
Special linearisation programming up to 20 points	On input: mV, V, mA. resistive sensor and potentiometer				
Extraction of the square root	On input mV, V or mA				

(1) Sensor break detection:
mA input (if down scale ≥ 3,5mA)
Other inputs: a 12µA pulsed current allows the detection of line or sensor break.

(2) Wiring possible in 2, 3 and 4 wire
Influence of the line resistance (0<Rl<25Ω) included in the announced intrinsic error.

(4) <±0.1% of the MR (B) for the version F if acquisition time <100ms

(3) CJC efficiency (-20 to +60°C):
Internal CJC: ±2°C ±0.03°C/°C
CJC (option terminal): ±1°C

MR Measure range

Thermal drift <150ppm/°C

Outputs

Code	Types of OUTPUTS	Features
µCv305 µCv805	1 analog	Current: Direct or reversed 0-20mA Load impedance ≤ Lr 600Ω Voltage: Direct or reversed 0-10V Load impedance ≥ Lr 5KΩ Accuracy: 0.1% in relation to the display
µCv405 µCv805	4 change-over relays	2 setpoints per relay configurable over the whole MR. Hysteresis programmable from 0 to 100%. Time delay programm. from 0 to 999.9 sec. (8A/250 VAC on resistive load)

Response time of the outputs:

(for a variation from 10 to 90% of the input signal)

Average response time: 150 ms (15ms for the version F)

Add 40 ms for the response time on the analog output, or 10 ms for the response time on the relay outputs.

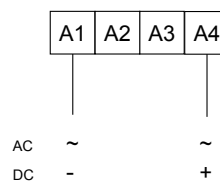
Galvanic isolation:

3.0kV-50Hz-1min. between Supply, Input, Analog output, Relay outputs

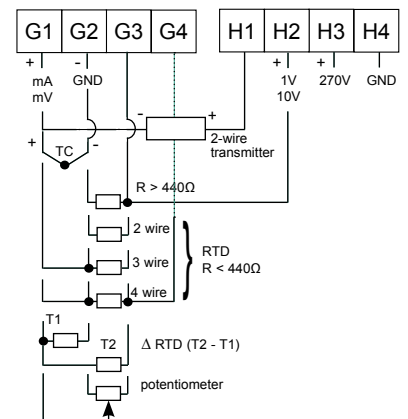
3.0kV-50Hz-1min. between relay outputs

Connectings

Supply

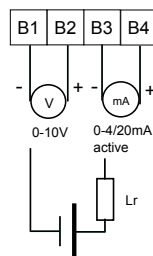


Inputs



Outputs

Analog output

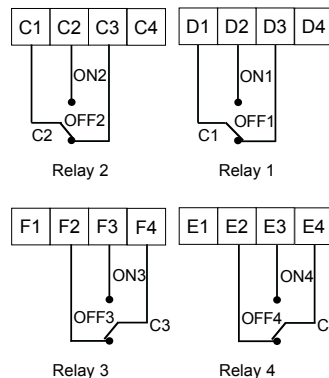


0-4/20mA passive external source 30V max.



The voltage or current outputs are not independent. One output type only to be activated by programming (V or mA).

Relay outputs



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