PROGRAMMABLE CONVERTERS

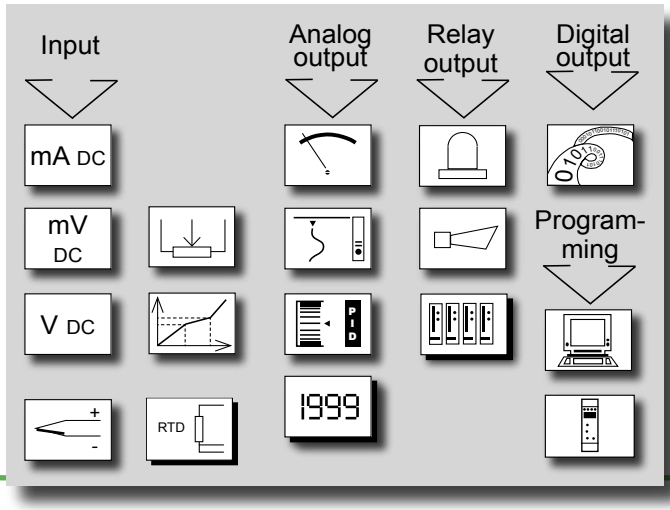
Series µC 3011

µC 3012/3011

1 analog output

µC 3212/3211

2 insulated analog outputs



- **Universal power supply**:
  20 to 270 Vac and 20 to 300 Vdc
- **Process input: (µC3012/3212)**
  ±100mV, ±1V, ±10V, ±300V, ±20mA,
- **Universal input: (µC3011/3211)**
  ±100mV, ±1V, ±10V, ±300V, ±20mA,
  Pt100 3 wire, Ni 100, ΔPt100, thermocouple, resistance and potentiometer.
- Average response time 150ms
- Supply for 2-wire sensor
- **Insulated analog outputs** (A)
  current 0-4-20mA (active/passive)
  or voltage 0-10V.

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

  Digital data link (N) insulated RS485 Modbus/Jbus

Detection of the sensor rupture.

Insulation between input / outputs / supply.

Self--zero and self-diagnosis

Mode driver : the analog output is piloted by the digital data link, or locally by the micro-console.

Function simulation of the input measure

CONVERTERS

Easy programming on front face via the micro-console keyboard, or with the PC software MCVision.

Programming with the Micro-console

This miniaturised micro-console connected on the front face of the instruments allows:
- the visualisation of the measure and the status of the analog and relay outputs,
- the visualisation and modification of the programming,
- the teleloading of programming files for duplication to other converters.

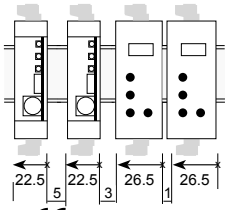
Programming by PC: software MCVision

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.

Digital data link RS485 (Modbus/Jbus)

Allows the communication with processing and explotation systems (PLC's), as well as a complete configuration of the input, the output and the safeties.

Protection: Case/terminals = IP20
Plug-off connectors for screwed connectings (2.5mm², flexible or rigid)
Weight: 240 g (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 µconsole : 26.5x80x130 mm
To allow the inserting of the µconsole: mount the instruments vertically (horizontal DIN rail), leaving a 5 mm space between each.
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).

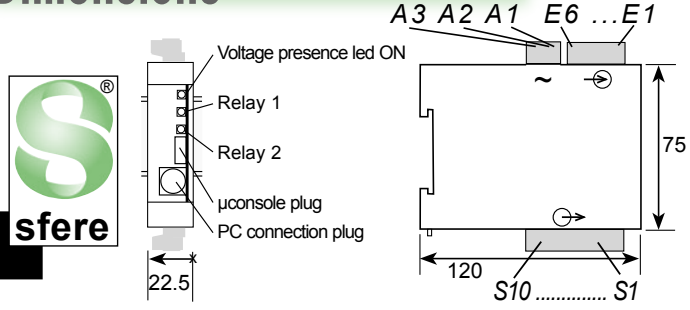
♦ Disturbance immunity according to the standard IEC 61000-6-2(IEC 61000-4-3 level 3, IEC 61000-4-4 level 4, IEC 61000-4-6 level 3)

Coding

Type µC 3x1x ARN

Outputs:
A analog I/U insulated
R 2 inverting relays
N data link RS 485

Dimensions



Power supply: *20 to 270 Vac 50/60/400 Hz and 20 to 300Vdc*

Power draw: 3,5 W max. 6 VA max.
Dielectric withstanding: 2 kV-50Hz-1min.

Order example: ***For a converter with universal input** + 1 analog output + 2 relays, powered in 230 V: request reference **µC 3011 AR***

Available versions:

µC 3011/3012	A	AR	ARN	-
µC 3211/3212	-	R	-	N

(consult for different configurations)

CA CO/82

Features

Inputs

µC 3012/ 3212	µC 3011/ 3211	Types of **INPUTS**	Measure range adjustable from:		Permanent overload	Intrinsic error	Console resolution	Input impedance
•	•	mA	-22 to +22mA with √♣		±100mA	< ±0.05% of the MR	10 µA	0.9V max. drop
•	•	mV♠	-110 to +110mV with √♣		±1V		10 µV	≥ 1MΩ
•	•	V	- 1.1 to +1.1V with √♣		±50V		1 mV	
			-11 to +11V with √♣				1 mV	
			-330 to +330V with √♣		±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 <25Ω
(2) Or 30 µV typical (60µV Max.)
♦ CJC efficiency: ±0.03°C/°C ±0.5°C from -5°C to +55°C
MR measure range
** line resistance <10Ω and R. max. 400Ω
√ Extraction of the square root

♠ A 12 µA pulsed current allows the detection of line or sensor rupture
♣ Cut off: the display of the console and the output of the µC 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 /°C

Outputs

µC 3011/ 3012	µC 3211/ 3212	Code	Types of **OUTPUTS**		Features
•		A	1 analog	Active/passive current	Current: direct or reversed 0-20mA Load impedance ≤ Lr 600Ω
				Voltage	Voltage: direct or reversed 0-10V Load impedance ≥ Lr 5KΩ (µC3011/3012 µC3211/3212N) ≥ Lr 500KΩ (µC3211/3212R)
	•		2 analog (insulated from each other)	Current or voltage	
•	• (4)	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)
• (5)	• (4)	N	Digital data link RS485 Protocole MODBUS/JBUS (EIA RS485) insulated. (with or without parity, even or odd; 1 or 2 stop bits)		

(4) The relay outputs R and the digital data link N are not available simultaneously.
(5) The digital data link N and the voltage output A are not available simultaneously.

Response time of the outputs:

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

Average response time: 150 ms

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

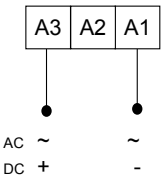
Galvanic partition:

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

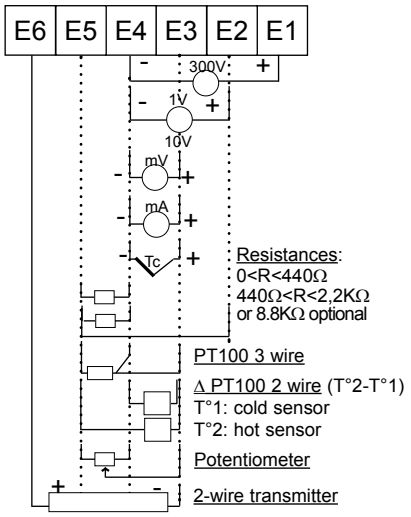
Wiring

Upper connectors

Supply

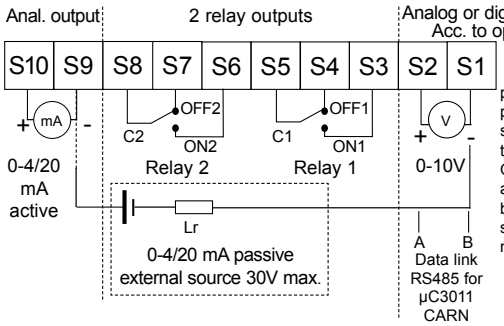


Inputs



Lower connector

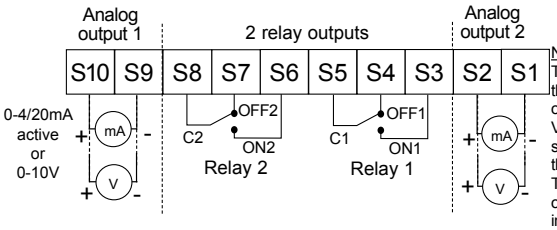
Outputs of the µC 3011/3012



¤ The voltage output or the passive current output is not available simultaneously with the digital data link. Only 1 of the 2 analog outputs can be activated at the same time (outputs not indepedent).

Outputs of the µC 3211/3212 (R)

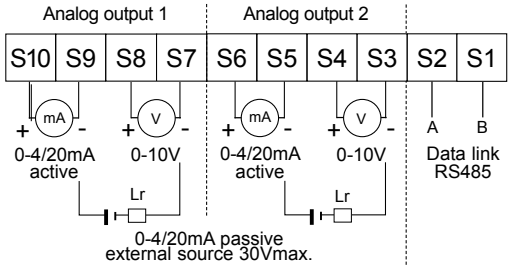
µC3211 Version with 2 insulated independent analog outputs.
µC3211 R Version with 2 insul. independent analog outputs and 2 relays.



Note : The type of the analog output (mA or V) must be specified on the order. The 2 analog outputs are insulated from each other.

Outputs of the µC 3211/3212 N

Version with 2 insulated independent analog outputs and insulated digital data link RS485.



Note : only 1 type of output (current or voltage) can be activated at the same time on each of the 2 outputs. The 2 analog outputs are insulated from each other. The RS 485 output is insulated from the analog outputs.

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