

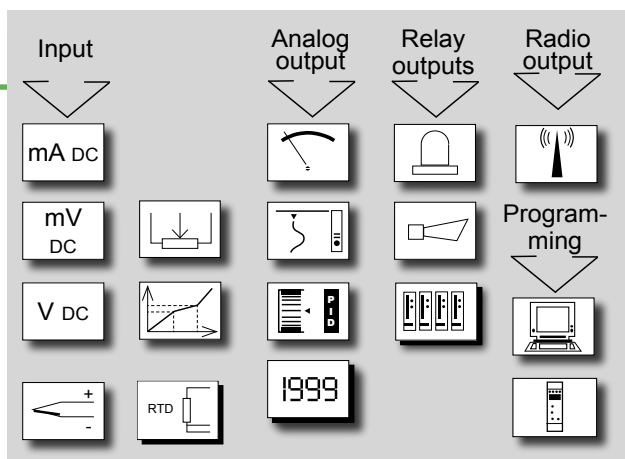
μCW 3011 AR

Used for the remote control, the watching, the telemetering in applications where the wiring is delicate and costly

Features

- **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.
- Average response time: 200ms
- Supply for 2-wire sensor
- **Insulated analog output (A)**
0-4-20mA (active/passive) current or 0-10V voltage.
- **Output 2 relays (R)**
(8A/250 VAC on resistive load).

- **Radio output:**
Mode sender or receiver
433-434 MHz band, 16 channels
RATED power: 10mW
License free use
- **Radio connection installation help menu:**
 - display of the reception level
 - of the sequence error rate
 - of the connection loss counter
- **Insulation:** input / outputs / supply.
- **Safety:**
Checking of the radio sequence validity by CRC16
Reception failure time out with setting in safety position
Checking of the current on the output loop
Self-diagnosis
Detection of the sensor rupture (depending on the input)
Checking of the configuration data
Programming protected by code
- **Test functions:**
 - Simulation of the input measure
 - Simulation of the analog output
 - Test for setting in error position



Configuration

Easy programming on front face via the micro-console or with the PC software MC VISION.

Programming with the Micro-console

Graphical rear-lit LCD allowing the visualisation of 4 types of information :

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

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

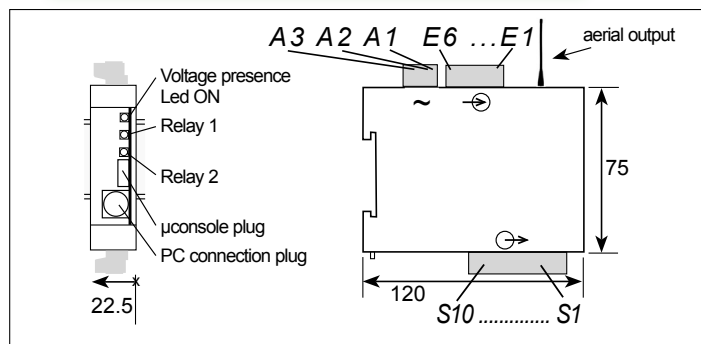
Programming by PC: MC VISION

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.

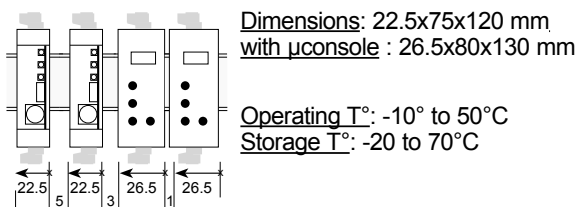


- **CE** according to IEC 61000-6-4, IEC 61000-6-2 (industrial environment).
- Disturbance immunity according to the standard IEC 61000-6-2(IEC 61000-4-3 level 3, IEC 61000-4-4 level 4, IEC 61000-4-6 level 3)

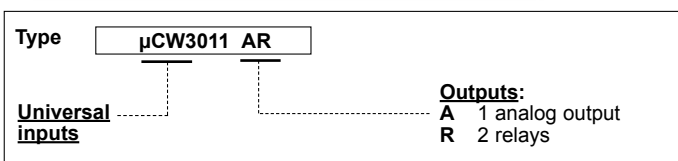
Dimensions



Protection: housing / terminals: IP 20
Plug-off connectors for screwed connections
(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.



Coding



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

Power draw : 3.5 W max. 6 VA max.
Dielectric withstanding: 2 kV-50Hz-1min.

Galvanic partition:

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



CONVERTERS

Features

Inputs

Types of INPUTS	Measure range adjustable from:		Permanent overload	Intrinsic error	Console resolution	Input impedance
mA*	-2 to +22mA -22 to +22mA		±100mA	< ±0.1% of the MR	10 µA	Max. drop 0.9V
mV*	-10 to +110mV -110 to +110mV		±1V		100 µV	≥ 1MΩ
V	-0.1 to +1.1V -1.1 to +1.1 V		±50V		1 mV	
	-1 to +11V -11 to +11V				10 mV	
	-30 to +330V -330 to +330V		±600V		100 mV	
Thermocouples* Standard IEC 581	°C	°F	-	<±0.1% of the MR (2)	0.1° or 1° C or 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				
Pt100Ω (1)* 3 wire sensor, Standard IEC 751 (DIN 43760)	°C	°F	-	<±0.1% of the MR	0.1° or 1° C or F	Current 250µA
	-200/850	-328/1562	-			
Ni 100 3 wire (1)*	-60/260	-76/500	-			
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)	0.1Ω (400Ω) 1Ω (2kΩ)	Current max. 250µA
Potentiometer	from 100Ω to 10 kΩ		-		0.1%	Voltage max. 100mV
Supply for 2-wire sensor	24 Vdc ±15% with protection from short-circuits. 25 mA max.					
Special linearisation programming up to 20 points	On inputs: mV, V, mA, resistive sensors and potentiometer					
Extraction of the square root	On inputs: mV, V or mA					

- * Sensor rupture detection: (2) Or 30 µV typical (60µV Max.)
mA input (if down scale ≥ 3.5mA)
Other inputs: a 12µA pulsed current allows the detection of line or sensor rupture.
- (1) The line resistance influence (0<R<25Ω) is included in the announced intrinsic error. MR measure range
Thermic drift <150ppm /°C

Outputs

Code	Types of OUTPUTS	Features
A	1 analog	Current: Direct or reversed 0-20mA Load impedance ≤ Lr 600Ω
	Active/passive current Voltage	Voltage: Direct or reversed 0-10V Load impedance ≥ Lr 5000Ω
R	2 change-over relays	2 setpoints per relay, configurable over 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: 200 ms (for a variation from 0 to 90 % of the input signal) (1)

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

• Radio

Frequency	433 to 434.790 MHz (16 channels of 100kHz)
Radio flow:	10 kbauds
Emission power	10 dBm (10mW)
Receiving sensitiveness	-104 dBm
Aerial impedance	50Ω
Aerial connector	Type SMA Reverse

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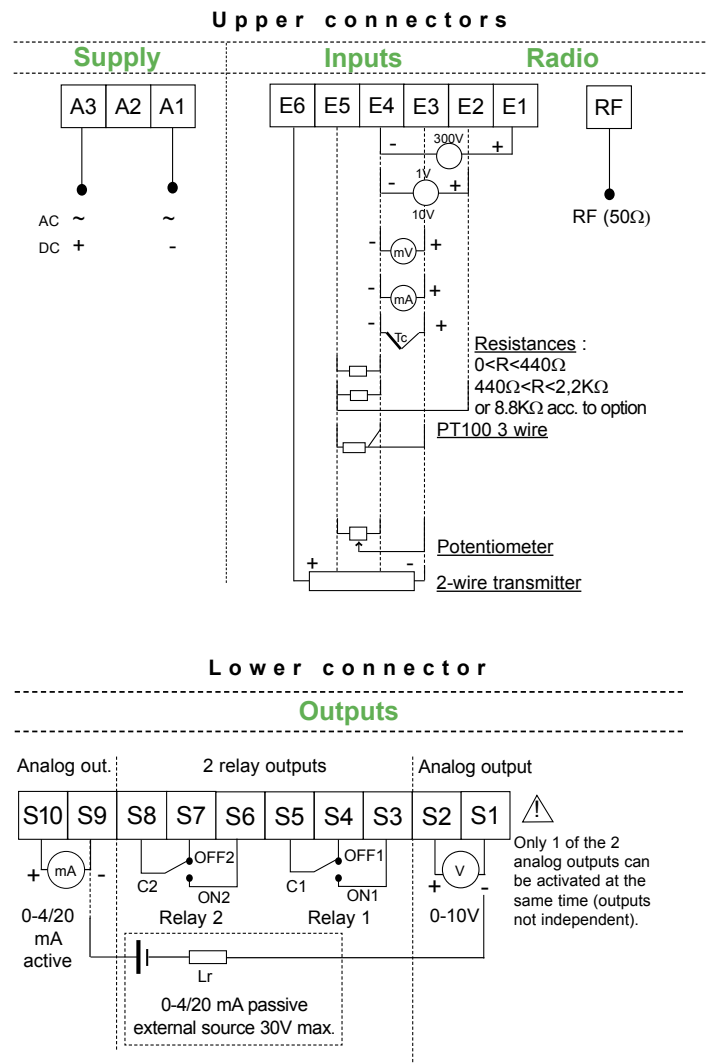
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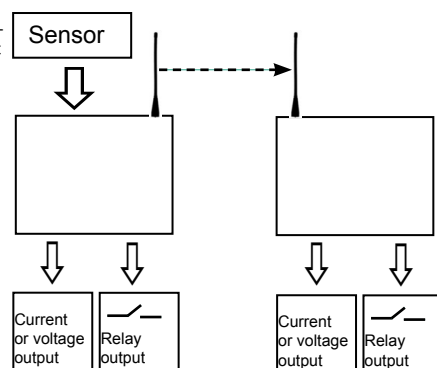
e-mail : info@sphere-net.com . http : //www.sphere-net.com

Wiring



Mode sender:

The µCW operates like a classical transmitter. Measurement of the input and positioning of its outputs. It will transmit its measure and the status of its outputs via radio.



Mode receiver:

The µCW transmits the values received via radio on its outputs and displays the measure value on its micro console

Reach in free field: from 1 to 10 KM depending on the used aerial (consult)

Your representative