



EU Type Examination Certificate Number: **0120/ SGS0006/R1**

Janz-Contadores de Energia,SA

Av.Infante D. Henrique 328
1800-223 Lisboa
Portugal

Instrument Identification:
C2##

Single Phase, Credit, Active Import kWh, Single & Multi-rate, Electricity Meter
Instrument Traceable Number
0120/ SGS0006

has been assessed and certified as meeting the requirements of

EU Directive 2014/32/EU **on Measuring Instruments Annex II, Module B**

It is certified that the manufacturer's technical design and specimen for the above instrument has been examined and, based on the evidence submitted, it is considered that the instrument conforms to the requirements of Annex V of EU Directive 2014/32/EU

This certificate must be used in conjunction with a certificate covering the product verification as required in Annex II, Module D or Annex II, Module F


This certificate is valid for 10 years from 19th October 2017 until 18th October 2027
Issue 1

Certification is based on report number(s) DUR44640/1/PF/EMA/06 dated 19th June 2006
EMA107891 dated 1st June 2007
EMA186674/1 dated 24th February 2014
EMA245262/1 dated 19th October 2017
EMA245262/1/TR50579 dated 19th October 2017

Authorised Signature


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1. Technical Data

Manufacturer	Janz-Contadores de Energia, SA.
Meter Type	C2##
Voltage Rating (<i>Un</i>)	220-240V
Current Rating (<i>I_{min}</i> – <i>I_{ref}</i> (<i>I_{max}</i>))	0,25-5(80)A, 0,5-10(60)A
Frequency (<i>Fn</i>)	50Hz
Active Accuracy Class (<i>kWh</i>)	A or B (kWh)
Type of circuit	1p2w
Temperature Range	-25°C to +55°C
Software/ Firmware Version No's	V02.10 or V02.11 , V03.12 (Anti Fraud Version) V04.00.0; V04.01.0; V04.02.0, V04.04.0
Checksum	DE2E
Identification Location	LCD & Nameplate
Mechanical Environment	M1
Electromagnetic environment	E2
Bill Of Materials Numbers	PCB BOM No: 9 1300 9001 f5j Mechanical BOM No: 9 1300 9001 f4i Assembly Drawing No's: 9 1300 9001 f2i & 9 1300 9001 f3d
IP Rating	IP51
Insulation Protective Class	Class II
LED Pulse Constant	3200 imp/ kWh
Impulse Voltage Rating	6kV
AC Voltage Rating	4kV
Main Cover Sealing Type	Wire & Crimp or tamper proof sealing tape concealing main cover screw
Integrity of meter	Inaccessible without breaking seals
Intended Location of the Meter	Indoor
Type of Register	Mechanical or LCD
Terminal Arrangement(s)	DIN
Location of Manufacturers Address	Associated Documents


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2. Photograph of Meter and Sealing Points

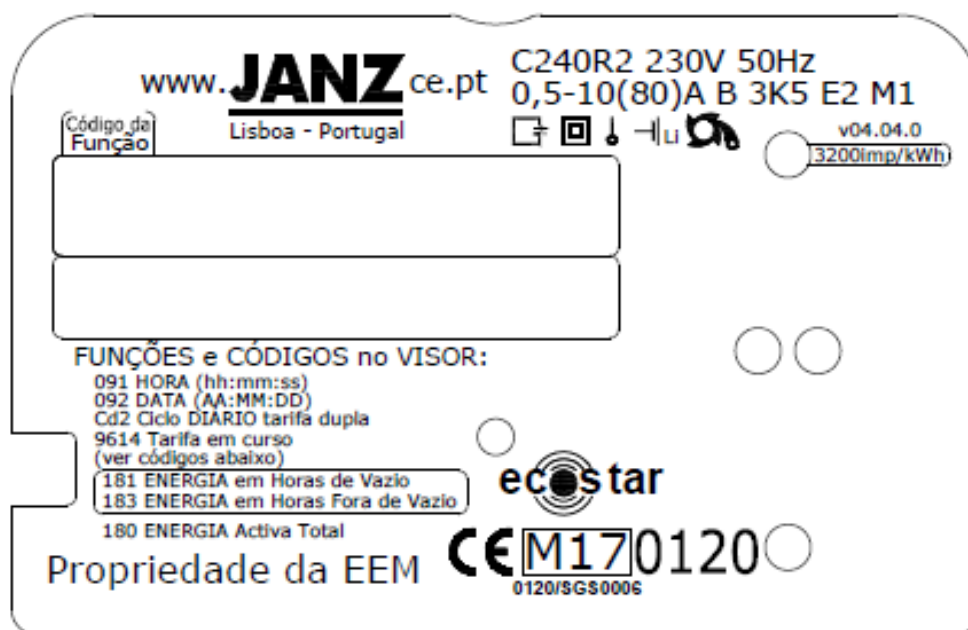



Main Cover Sealing Point

Terminal Cover Sealing Point

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3. Nameplate Example



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4. Calculation of the composite error/ MPE


During the type approval examination the influence factors for temperature, frequency and voltage are determined per load point. The table below represents the sum of the square values per load, determined via the following formula:-

$$\delta e(T, U, f) = \sqrt{(\delta e^2(T, I, \cos\phi) + \delta e^2(U, I, \cos\phi) + \delta e^2(f, I, \cos\phi))}$$

where

$\delta e(T, I, \cos\phi) =$ Additional error due to variation of the temperature at the same load
 $\delta e(U, I, \cos\phi) =$ Additional error due to variation of the voltage at the same load
 $\delta e(f, I, \cos\phi) =$ Additional error due to variation of the frequency at the same load

		Temperature, Frequency & Voltage Influence Factors					
Current	PF Cos	-25°C	-10°C	5°C	30°C	40°C	55°C
I _{min}	1.0	0.43	0.35	0.25	0.19	0.28	0.44
I _{tr}	1.0	0.55	0.48	0.34	0.09	0.12	0.33
10I _{tr}	1.0	0.69	0.59	0.44	0.17	0.04	0.25
I _{max}	1.0	0.88	0.74	0.55	0.21	0.08	0.24
I _{tr}	0.5ind	0.43	0.38	0.24	0.21	0.30	0.50
10I _{tr}	0.5ind	0.67	0.56	0.44	0.13	0.05	0.29
I _{max}	0.5ind	0.45	0.69	0.54	0.23	0.15	0.33
I _{tr}	0.8cap	0.58	0.47	0.36	0.14	0.16	0.39
10I _{tr}	0.8cap	0.71	0.60	0.47	0.17	0.07	0.28
I _{max}	0.8cap	0.89	0.74	0.59	0.23	0.08	0.30

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5. Annex of Variants


Product Variant Identification Details:

Type Designation

Description of meter

CONNECTION MODE	C	Single phase meter for direct connection (2 wires)
SERIES	2	The concept of series is related with the physical aspect of meter (meter case), seven series remain available
TARIFF	10	Single rate (electromechanical register), kWh
	11	Single rate (LCD), kWh
	22	Double rate (LCD), kWh, with internal tariff switch
	31	Triple rate (LCD), kWh, with internal tariff switch
	40	Programmable Multirate, kWh (maximum demand registers, no load profile)
INTERFACE TO THE USER	-	Without push buttons (LCD scrolls the programmed data)
PULSE OUTPUT	-	No pulse output
	E1	One pulse output (through terminals 21/22)
	E2	Two pulse outputs (through terminals 23/24)
PULSE INPUT	-	No pulse input for tariff switch
AUXILIARY COMMUNICATIONS	-	No auxiliary communications
	R2	With RS232 port
	R4	With RS485 port
ANTI-TAMPER	-	Without external cover opening detection device
VERSION	-	The initial version is not identified
	.A	The concept of version is related to hardware changes or significant firmware modifications, but always within the same "series" (see above)
	.B	
	...	

Modifications to the meter(s) described according to approval No. **0120/ SGS0006/R1** must be notified to the issuing body to confirm the meter(s) continuing compliance to the relevant pattern approval standard(s).

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6. Document Revision History

Issue	Date	Comments
1	19/10/2017	Re approval certification issue

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