EU Type Examination Certificate Number: **0120/SGS0390**

Itron-Ganz Meter Company Ltd

Tancsics M. u.11
P.O.B. 396
H-2101 Gödöllõ
Hungary

Instrument Identification:
3.HZ-AC-T

Polyphase, Active, Import/ Export (kWh), Credit, Transformer Operated, Electricity Meter

Instrument Traceable Number
0120/SGS0390

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 16th November 2018 until 15th November 2028
Issue 4

Certification is based on report number(s) EMA258630/1 dated 15th November 2018, EMA258630/1/TR50579 dated 14th November 2018

Authorised Signature

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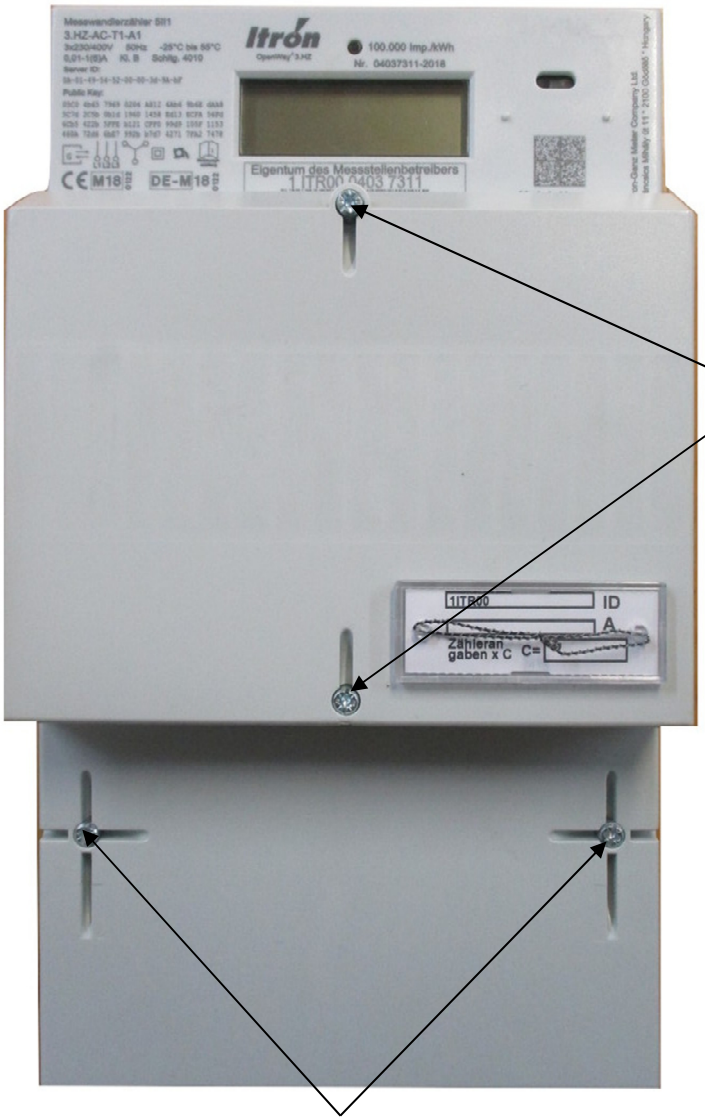
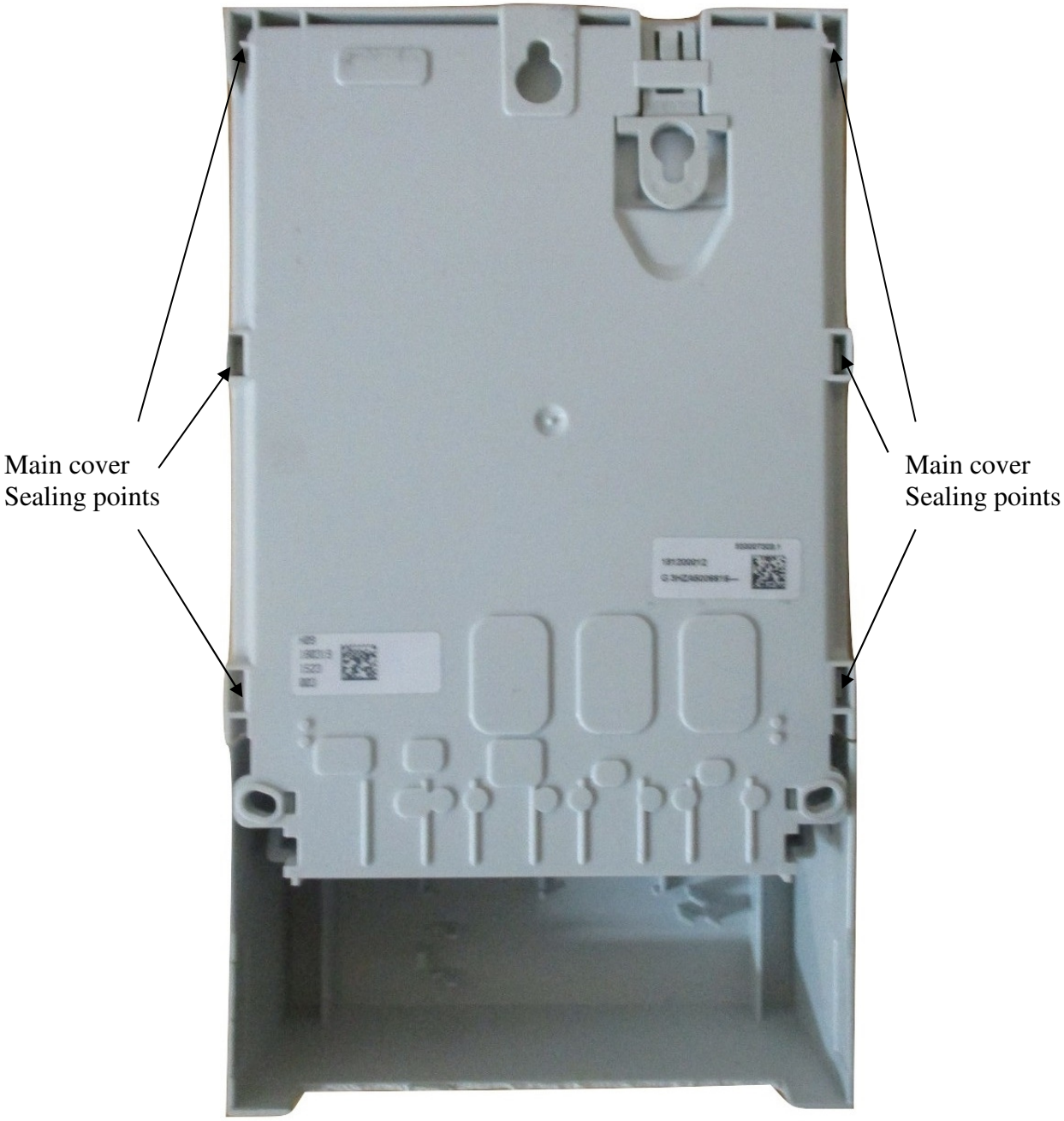
1. Technical Data

Manufacturer	Itron - Ganz Meter Company Ltd
Meter Type	3.HZ-AC-T
Voltage Rating *(Un)*	3x230/400V
Current Rating *(Imin – Iref (Imax))*	0,01-1(6)A
Frequency *(Fn)*	50Hz
Active Accuracy Class *(kWh)*	A or B (kWh)
Type of circuit	3p4w
Temperature Range	-25°C to +55°C
Software/ Firmware Version No's. **CRC Checksum No's.** **Identification Location**	V01.12, V01.13, V01.14 20dd, fa11, 4e1e LCD & Nameplate
Bill Of Materials Number	A5006359 Hertz CT PCBA
IP Rating	IP51
Insulation Protective Class	Class II
LED Pulse Constant	100,000imp/kWh
Impulse Voltage Rating	6kV
AC Voltage Rating	4kV
Main Cover Sealing Type	Ultrasonically welded
Integrity of meter	Inaccessible without breaking seals
Intended Location of the Meter	Indoor
Type of Register	LCD
Terminal Arrangement(s)	DIN
Location of Manufacturers Address	Nameplate

2. Photograph of Meter and Sealing Plan




Main cover
Sealing points
Main cover
Sealing points

3. Example of Nameplate

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:-

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

where

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

		Influence Factors for Temperature. Frequency & Voltage					
Current	PF Cos	-25℃	-10℃	5℃	30℃	40℃	55℃
Imin	1.0	0.35	0.26	0.25	0.23	0.38	0.40
Itr	1.0	0.75	0.55	0.25	0.10	0.22	0.44
20Itr	1.0	0.78	0.57	0.18	0.10	0.24	0.44
Imax	1.0	0.78	0.56	0.11	0.11	0.24	0.45
Itr	0.5ind	0.73	0.51	0.22	0.17	0.27	0.40
20Itr	0.5ind	0.76	0.54	0.13	0.16	0.25	0.38
Imax	0.5ind	0.75	0.54	0.12	0.17	0.25	0.38
Itr	0.8cap	0.40	0.55	0.28	0.10	0.25	0.47
20Itr	0.8cap	0.80	0.57	0.23	0.10	0.25	0.49
Imax	0.8cap	0.80	0.57	0.25	0.11	0.26	0.50
					0.00	0.00	0.00
L1							
Itr	1.0	0.76	0.55	0.35	0.10	0.28	0.49
20Itr	1.0	0.80	0.58	0.36	0.12	0.25	0.48
Imax	1.0	0.80	0.59	0.31	0.12	0.26	0.48
Itr	0.5ind	0.71	0.49	0.16	0.22	0.28	0.48
20Itr	0.5ind	0.80	0.56	0.17	0.18	0.27	0.40
Imax	0.5ind	0.80	0.57	0.18	0.18	0.27	0.39
L2							
Itr	1.0	0.71	0.49	0.09	0.09	0.24	0.40
20Itr	1.0	0.74	0.53	0.04	0.10	0.24	0.42
Imax	1.0	0.76	0.54	0.10	0.10	0.24	0.42
Itr	0.5ind	0.66	0.48	0.22	0.17	0.24	0.37
20Itr	0.5ind	0.75	0.51	0.12	0.14	0.22	0.33
Imax	0.5ind	0.71	0.49	0.17	0.20	0.28	0.41
L3							
Itr	1.0	0.77	0.59	0.27	0.12	0.29	0.46
20Itr	1.0	0.80	0.55	0.21	0.10	0.25	0.47
Imax	1.0	0.77	0.55	0.21	0.12	0.25	0.47
Itr	0.5ind	0.78	0.55	0.27	0.21	0.26	0.42
20Itr	0.5ind	0.79	0.58	0.22	0.18	0.26	0.43
Imax	0.5ind	0.81	0.62	0.30	0.11	0.23	0.39

5. Annex of Variants

Product Variant Identification Details:

Type Designation **Description of meter**

Beispiel: **3HZ-** A C - T 4 - B 1

	Feature	TS	Description
1	Product version	A	Version acc. FNN requirements MS2020
2	Network	C	3-Phase/4-wire
3	Maximum current I_{max}	T	Transformer connection 6 A
4	Measurement	1	+A (active energy import, with reverse running stop)
		2	-A (active energy export, with reverse running stop)
		3	-A (active energy export; without reverse running stop)
		4	+/- A (active energy, import/export)
5	Accuracy	B	Cl. B
6	Communication	1	INFO-Schnittstelle + RS485

The 3.HZ-AC-T has 4 configurable modes:

1. +A (active import with RRS)
2. -A (active export with RRS)
3. -A (active import without RRS)
4. +A/-A (active import/export without RRS)

The meters tested were configured in Mode 4 +A/-A (import/export) as this mode covers all modes.

Modifications to the meter(s) described according to approval No.**0120/SGS0390** must be notified to the issuing body to confirm the meter(s) continuing compliance to the relevant pattern approval standard(s).

6. Document Revision History

Issue	Date	Comments
1	16/11/2018	Initial Issue
2	12/02/2019	New software version V01.13 and CRC checksum fa11
3	11/03/2019	Statement regarding meter configuration used for test added.
4	01/04/2019	New software version V01.14 and CRC checksum 4e1e

END OF CERTIFICATE