Residential



LUN10F

Technical data



Singlephase 2 wire meter CE certified on 50470 standards Non-volatile memory 24 logs of index storage memory 24 units terminal cover intrusion registry and warning Main cover intrusion registry and warning 24 logs of phase failure registry Clips and screws MS-58 Previous month data index display on LCD screen Instant current, voltage, power factor and frequency display on LCD screen Load Profile 15 minutes / 90 days (expandable to 365 days)

Date: 22.02.2022 File name: LUN10FTECHDATAEN- LUN Series LUN10F Technical Data EN

Revision history

Version	Date	Comments
а	22.02.2022	First release.

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3/8

General

Measurement:
-Combined bi-directional measurement
-Single-phase/Two-wire
Communication:
-Bi-directional communication with optical port
Inputs and outputs:
-Optical port for local reading, configuration and para- meterisation
Control buttons:
-Scroll button for display
LCD display:
 -8 digits for register value display
-Units of measure on display
-Multi-energy units of measure

Voltage and frequency	
Nominal voltage Un	
LUN10F	1 x 230/400 VAC
Extended operating voltage range	
	80% – 115% Un
Nominal frequency fn	
	50 Hz (± 2%)

IEC-specific data

Current

Base current Ib	
	5 A
Maximum current Imax	
Metrological	100 A
Thermal	100 A
Short-circuit ≤ 10 ms	
	30 x Imax

Measurement accuracy

LUN10F		
Active energy, to	EN 50470-1/50470-3	
	(IEC 62052-11/62053-21) class 1	

Measurement behaviour

Starting current	
According to IEC/EN	0.4% Ib
Typical	approximately 0.25% lb

MID-specific data

Current

Reference current Iref	
	5 A
Minimum current Imin	
	0.25 A
Maximum current Imax	
	100 A
Thermal current Ith	
	100 A

Measurement accuracy

LUN10F
According to EN 50470-1/50470-3

Measurement behaviour

Starting current Ist

0.4 % of Iref (≤ 20 mA)

class B

General data	
Operating behaviour	
Voltage failure (power-down)	
Voltage (for Un=230/400 V) < 175 V	
Function standby	< 5 s
Detection of energy direction / phase vo	oltage < 3 s
Voltage	> 180 V
Power consumption	
Total power consumption of the meter	
Without communication:	
Active power at Un (typical)	< 0.6 W
Apparent power at Un (typical)	< 2.0 VA
Temperature range	
Operation (meter)	–40 °C to +70 °C
Operation (LCD display)	–25 °C to +60 °C
Storage	–40 °C to +85 °C
-	
Temperature coefficient	
Range –40 °C to +70 °C	
Average value (typical)	\pm 0.01% per K
At cosØ=1 (from 0.1 lb to Imax)	\pm 0.05% per K
At cosØ=0.5 (from 0.2 lb to Imax)	\pm 0.07% per K
Extended environmental conditions IEC/EN 62052-31	according to
Maximum operating altitude	2000 m
Climatic conditions	–25°C to +55 °C
Ingress protection according	to IEC/EN 60529
	IP54
Electromagnetic compatibility	
Electrostatic discharges according to I	EC/EN 61000-4-2
Contact discharge	8 kV
Air discharge	15 kV
Electromagnetic RF fields according to I	
80 MHz to 2 GHz	10 and 30 V/m
Radio interference suppression according	
	class B
East transignt burst tost	EC/EN 61000-4-4
Fast transient burst test according to I Current and voltage circuits under load	LC/LIN 01000-4-4
according to IEC 62053-21	4 kV
	EC/EN 61000-4-5
Current and voltage circuits	4 kV

Insulation strength		
insulation strength	4 kV at 50 Hz	for 1 minute
Impulse voltage 1.2/50	us	
According to IEC 62052-		4 k\
	(
Electrical safety		
Electrical safety	according to IEC/	'EN 62052-32
Overvoltage category		I
Utilisation category		UC
Protective class and IEC 62052-31	according to IEC,	/EN 62052-1
	Insu	ulation class
Calendar clock		
Normal operation		
Accuracy (at +23 °C)		±0.5 s/day
(EN 62054-21 requireme	ent for time switche	es: 0.5 s)
Reserve running		
Accuracy (at +23 °C)		< 1 s/da
(EN 62054-21 requireme	ent for time switche	es: 1.0 s)
Back-up time (power res	serve)	
With battery 1		10 year
Battery type		ER1425
With battery 2		10 years
Battery type		CR2032
Display		
Characteristics		
Type LCD liquid crystal d	lisplay	
Digit size value field		6.68 mr
Number of digits value f	ïeld	
Digit size code field		4.5 mr
Number of digits code fi	eld	
Inputs and outputs		
According to IEC/EN 620		class
	ssible with resistor	-
Configurable as pulse co	unter, alarm, remot rate control	te supply

Optical pulse output	active energy
Туре	red LED
Pulse length settable from	2 to 40 ms
Pulse constant	1000 imp/kWh
Material	Brass
Phase Terminal Diameter	Ø6.7 mm
Neutral Terminal Diameter	Ø6.5 mm
Terminal type 2 screws for phaset for neutral terminal (2	
Screw Dimensions	M5 X 9
Screw Type Phillips-Slotted Cor	mbi Fillister Head
Screw Head Dimension N	/laximum Ø7 mm
Screw Material	
Zn-plated steel, Tin-plated steel, nic	ckel plated, brass, rial can be varied
Ideal value of Screw Tightening Torque	1,5 Nm
Connection with the conductor	
Conductor(shunt	
There is another screw (behalf of the ne	nal with 2 screws eutral conductor) minal connection
Phase conductor connection screws dim material	nension, type,
2pcs M4 x 6, Pan head Phillip	
Material: Brass plated (draft), optiona Tin-plated steel, nickel plated, etc. Mate	
Neutral conductor connection screws di material	mension, type,
1 pc M4 x 8, Pan head Phillin Material: Brass plated (draft), optiona Tin-plated steel, nickel plated, etc. Mate	I: Zn-plated steel,
RS 485 terminals:	
Brass-coated	Zamak, 2 screws
RS 485 terminal screws:	
2 pcs N	//3x7, 2 pcs M3x5

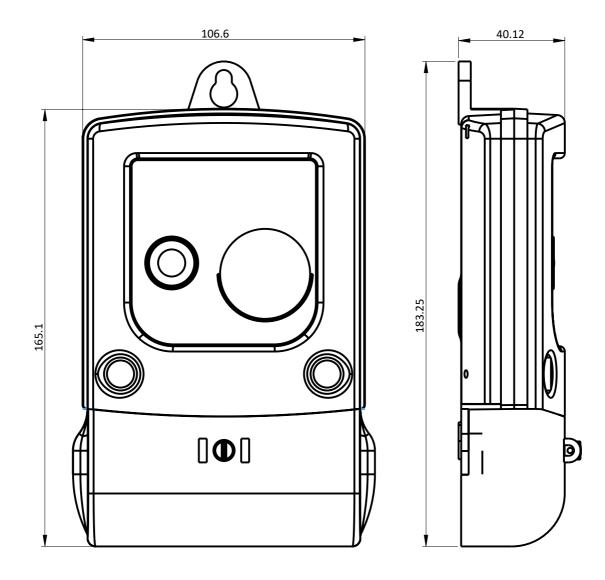
Communication interfaces

Optical interface	
Туре	serial, bi-directional interface
Protocol	according to IEC/EN 62056-21

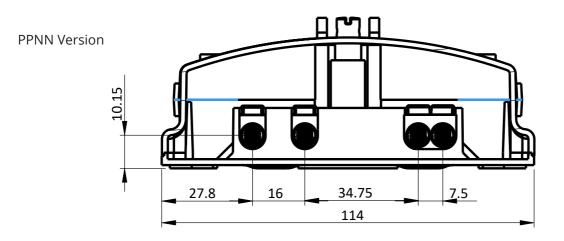
Material

Base Cover	
of glass f compliance w	tardant Polyamide 6 reinforced with 20% iber, Halogenated flame retardant grade, ith RoHs derivatives, with rating UL94 V0 glow-wire at 960°C (Opaque, GREY G62)
Top Cover	POLYCARBONAT UL-94 V2 (Transparent)
Terminal Cover	POLYCARBONAT UL-94 V2 (Transparent)
Name Plate	Polystrol 486M (HIPS) UL94 HB (Opaque, laser applicable)
LCD Holder	POLYCARBONAT UL-94 V2 (Opaque)
Weight and dime Weight approximately 29 Width/height/de 114/184/46 mm	90 gr. epth
Optional Feature	es
RS 485	optional
Туре	serial, bi-directional interface
Protocol	according to IEC/EN 62056-21
BS Connection Ty	уре

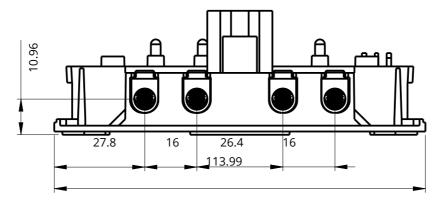
Dimensions (with terminal cover)



Dimensions of connection terminals









LUN10FTECHDATAEN- LUN Series LUN10F Technical Data EN

Contor static monofazat de energie electrica tip LUN10F

PAŞAPORT TEHNIC

Producător: LUNA ELECTRIK SAN. VE TIC. A.Ș.

10.001 Str. No:9 Atatürk O.S.B.; 35620 Çiğli / İzmir - TÜRKİYE; Tel: +90 232 472 15 45 Fax: +90 232 472 15 50 www.lunatr.com

Certificat de acceptare:

№ de fabricare, Data, ora,

corespunde parametrilor tehnici indicați în manualul de exploatare.

1. DESTINAȚIE

Mijloc de măsurare utilizat pentru măsurarea consumului de energie electrică în scopul decontării energiei electrice între furnizor și consumator.

Contor static monofazat de energie electrică tip LUN10F se încadrează în categoria dispozitivelor de măsurare cu tarif simplu de interes public.

Principiul de funcționare al contorului se bazează pe utilizarea unor blocuri electronice de măsurare (elementul de măsurare este construit în bază de transformator de curent), care realizează conversia tensiunilor și curenților aplicate la intrare în impulsuri de ieșire, proporționale cu energia electrica. Integrarea și arhivarea se efectuează de către microprocesor.

2. CARACTERISTICILE TEHNICE DE BAZĂ

2. CHARTERISTICILE TEINICE	
Clasa de exactitate la măsurarea energiei	В
Valori de referință ale tensiunii nominale	230 V
Valori nominale pentru curentul de bază	5 A
Curent maxim	100 A
Valori nominale ale frecvenței	50 Hz
Constanta contorului	1000 imp/kWh
Puterea absorbită activă circuit de tensiune	nu mai mult 0,75 VA / 0,4W
Puterea absorbită aparentă pentru circuit de curent	nu mai mult 0,1 VA
Temperatura de funcționare nominală	de la -40°C pînă la +70°C
Clasa de protecție	
Mărimi de gabarit, max: Înălțimea	115 mm
Lungimea	168 mm
Lațimea	45 mm

3. COMPLETAREA

Contor de energie electrică	1 buc.
Ambalaj	1 buc.
Paşaport	1 buc.

4. GARANȚIILE PRODUCĂTORULUI și TERMENUL de EXPLOATARE

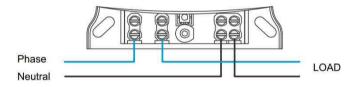
Producătorul garantează corespunderea contorului de energie electrică cerințelor documentației tehnice doar în cazul respectării condițiilor de transportare, păstrare, montare și exploatare.

Termenul de garanție constituie 24 luni de la data livrării.

Condițiile de garanție pe teritoriul Republicii Moldova sunt asugurate de către Techno Retail SRL mun.Chisinau str.Ginta Latina 12/6, tel.**0-22-903-000**. Termenul de exploatare 24 ani.

Instalarea contoarelor de energie electrică va fi efectuată numai de către persoane calificate (licențiate în acest domeniu).

5. SCHEMA DE CONECTARE



6. VERIFICAREA METROLOGICĂ

Contor static monofazat de energie electrică tip LUN10F ... este supus verificării metrologice periodice cu perioada de verificare - 96 luni .

Data	Tipul verificării	Rezultatele verificării	Semnătura verificatorului	Amprenta mărcii metrologice de verificare	Buletin de verificare

AB UYGUNLUK BEYANI

EU DECLARATION OF CONFORMITY

1. Cihaz modeli/Cihaz Instrument model/Instrument : LUN10F

Sayacın seri numarası: Serial number of the meter:

2. Üretici adı ve adresi

Name and address of the manufacturer

: LUNA A.S. 10.001 Str. No:9 Ataturk O.S.B. Cigli-Izmir-TURKEY

(No 0002)

3. Bu uygunluk beyanı üreticinin sorumluluğu altında verilir.

This declaration of conformity is issued under the sole responsibility of the manufacturer.

4. Beyanın konusu:

Object of declaration:

5.	Yukarıda belirtilmiş olan uygunluk beyanı aşağıdaki ilgili AB uyumlandırma mevzu- atı ile uyumludur:	The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:
	-Üye devletlerin ölçü aletleri pazarındaki uyumluluğu gerçekleştirmek üzere ya- salarının uyumluluğu hakkındaki Avrupa Parlamentosu ve Konseyi'nin 2014/32/EU direktifi	-Directive 2014/32/EU of the European Par- liament and of the Council of 26 February 2014 on the harmonisation of the laws of the member states relating to the making available on the market of measuring ins- truments.
	-WELMEC Kılavuzu 11.1, Sayı 4 -WELMEC Kılavuzu 7.2, Sayı 5 -OIML R 46 -1/-2 Sürüm 2012 (E) -Direktif 2015/13/EU	-Welmec Guide 11.1, Issue 4 -Welmec Guide 7.2, Issue 5 -OIML R 46 -1/-2 Edition 2012 (E) -Directive 2015/13/EU

 Uyumluluğun beyan edildiği ilgili standart referansları: References to the relevant harmonised standards to which conformity is declared:

İlgili MODÜL B uygunluk değerlendirme prosedürlerini gerçekleştiren ve yayınlayan 1783 sayılı onaylanmış kuruluş (Türk Standartları Enstitüsü)

The notified body No. 1783 (Turkish Standards Institution) performed conformity assessment procedures MODULE B and issued:

AB Tip Onayı Belge No EC type-approval certificate No

: 1783-MID-065

İlgili MODÜL D uygunluk değerlendirme prosedürlerini gerçekleştiren ve yayınlayan 1432 sayılı onaylanmış kuruluş (Slovenska legalna metrologia n.o.)

The notified body No. 1432 (Slovenska legalna metrologia n.o.) performed conformity assessment procedures MODULE D and issued:

Kalite Yönetim Sistemi Onay No Approval on a Quality Management System No

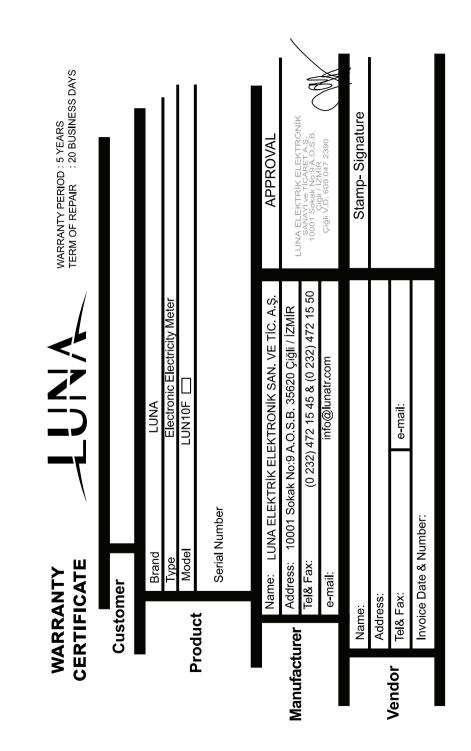
: SK-09-015D

Tarih:

Date

8.Firma adına imza: Signed for and on behalf of: Izmir, Mustafa KARABAGLI

Yönetim Kurulu Başkanı (Chairman of the Board)





EU - TYPE EXAMINATION CERTIFICATE

2014/32/EU Measuring Instruments Directive

1783-MID-065

In accordance with Measuring Instruments Directive dated February 26, 2014 and numbered 2014/32/EU of the European Union Parliament and "Ölçü Aletleri Yönetmeliği (Measuring Instruments Directive)" numbered 2014/32/AB which was published in Official Journal of Turkish Republic dated 29.06.2016 and numbered 29757:

Manufacturer	: LUNA ELEKTRİK ELEKTRONİK SAN. VE TİC. AŞ.
	Atatürk Organize San. Böl. 10001. Sokak No:9 Çiğli / İZMİR
Essential requirements Applied	: MID Annex I and Annex MI-003
Name of Measuring Instrument	: Single-Phase Active Electrical Energy Meter
Туре	: LUN10F
	Environmental Classes - Climatic -40 °C / +70 °C - Mechanic M1 - Electromagnetic E2
Project Number	: 1902-19/12995
Comformity Assessme Report	nt : 1902-MID-065/2019-01
Date of issue	: 24.01.2019
Valid until	: 23.01.2029
Total Page Number	: 10

Sezai DOĞAN Director of Directives Ankara 24.01.2019 Rev 00





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TURKISH STANDARDS INSTITUTION Certificate No:1783-MID-065/Rev. 00

1. General Information about Electical Energy Meter

1.1 Designation

Electronical electric meter measuring active electrical energy and maximum power and showing these data on the LCD Display, auto-correcting day light saving time in summer and winter, keeping the intended data and programs in memory, getting a line on these data when required.

1.2 Design

Essential Parts of the Meter

- Electronic (circuit) card
- Lower cover-housing
- Upper cover
- Terminal cover

1.3 Metrological Characteristic

Measurement of the electrical energy

1.4 Software

21.01

1.5 Supplementary equipments

RS485 communication port

1.6 Equipments out of the scope of MID

RS485 communication port



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EU - TYPE EXAMINATION CERTIFICATE

2014/32/EU Measuring Instruments Directive

1783-MID-065

In accordance with Measuring Instruments Directive dated February 26, 2014 and numbered 2014/32/EU of the European Union Parliament and "Ölçü Aletleri Yönetmeliği (Measuring Instruments Directive)" numbered 2014/32/AB which was published in Official Journal of Turkish Republic dated 29.06.2016 and numbered 29757:

Manufacturer	: LUNA ELEKTRİK ELEKTRONİK SAN. VE TİC. AŞ.
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Essential requirements Applied	: MID Annex I and Annex MI-003
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Туре	: LUN10F
	Environmental Classes - Climatic -40 °C / +70 °C - Mechanic M1 - Electromagnetic E2
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Sezai DOĞAN Director of Directives Ankara 24.01.2019 Rev 00



Total Page Number



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Certificate No:1783-MID-065/Rev. 00

1. General Information about Electical Energy Meter

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1.2 Design

Essential Parts of the Meter

- Electronic (circuit) card
- Lower cover-housing
- Upper cover
- Terminal cover

1.3 Metrological Characteristic

Measurement of the electrical energy

1.4 Software

21.01

1.5 Supplementary equipments

Not applicable

1.6 Equipments out of the scope of MID

Not applicable



Sayfa 2 / 10



Certificate No:1783-MID-065/Rev. 00

2. Technical data

Туре	LUN10F
Definition	1 phase, 2 wired, multi tariff, with demand meter, outdoor, active electronic electrical meter
Accuracy Class	Class B
Software Version No	21.01
Checksum	29D2C1AF
Place	İzmir
Meter Location	Outdoor
Meter Integrity	Meter integrity is preserved by seal and intervention from the outside is inhibited
Sealing Type	Plastic Pounding Seal
Circuit Type	Directly connected
Frequency	50 Hz
Reference Voltage (V)	230 V
Operating Voltage (V)	Between 0,8Un and 1,15Un
Starting Current (Ist)	20 mA (0,04Itr)
Minimum Current (Imin)	0,25 A
Transitional Current (Itr)	0,5 A
Reference Current (Iref)	5 A
Maximum Current (Imax)	100 A
Meter Constant	1000 imp/kWh
Operating Temperature	-40°C+70°C (3K7)
Relative Humidity	Max. %95
IP Rating	IP54 (Outdoor)
Protection Class	II (Two)
Mechanical Environment Class	M1
Electromagnetic Environment Class	E2
Voltage Circuit Power Consumption	< 2W, 10 VA
Current Circuit Power Consumption	< 4 VA
Electrostatic Discharges	Contact: 8 kV Air: 15 kV
Impulse Voltage	6 kV
Communication	Optic



TÜRK STANDARDLARI ENSTİTÜSÜ

TURKISH STANDARDS INSTITUTION

Certificate No:1783-MID-065/Rev. 00

3. Marking

The following data shall be marked on the water meter

- manufacturer's name and/or registered trademark,
- phase number and connection cable number
- year of production and serial number,
- current gauging interval, minimum current (Imin), reference current (Iref), maximum current (Imax)
- reference frequency (Hz),
- meter constant
- accurancy class
- electric security class güvenlik sınıfı (double square markfor meters with insulating lining)
- operating tempurature interval or environmental class)
- nominal voltage (primary and secondary voltage if with transformer),
- EU-Type examination certificate number,
- comformity marking according to the regulation in regards to the measuring intruments

3.1 Registered trademark of the manufacturer

The manufacturer uses the following figure inscription commercial trademark on the electrical energy meters



4. Sealing

Lower housing of the meter and upper cover are screwed together and it is stamped by attaching a plastic seal on the gap above the screw. Terminal cover is sealed by authorised personnel after the meter has been mounted.

5. Terms of Production, putting into use and usage

5.1 Production

3:2006

- no special terms identified for production

5.2 Putting into use

ole installed in the plumbing as mentioned in installation

wpe tests of the meter were carried out according to EN 50470-1:2006 and EN 50470-



Certificate No:1783-MID-065/Rev. 00

5.3 Requirements for usage

- must be used in accordance with the terms of the user's manual given by the manufacturer.

6. Documentation used within the scope of assessment

- Testing report dated 05.12.2018 and EL18-0049 issued by Eldaş Elektrik, Elektronik San. ve Tic. A.Ş.

- Manufacturer's technical file, technical drawings, component lists

7. Standards and regulations used within the scope of assessment

7.1 Regulations, harmonised standards and mandatory normative documents

- Measuring Instruments Directive numbered 2014/32/AB published in the Official Journal dated 29.06.2016 and number 29757

- EN 50470-1:2006
- EN 50470-3:2006
- OIML R 46:2012
- 7.2 Reference documents
- WELMEC Guide 7.2

8. Conclusion

Structural, technical and metrological parameters of the meter must be compatible with the documentation submitted with this Type Examination Certificate. The meter must meet the requirements of the Measuring Instruments Directive numbered 2014/32/EU of the European Union Parliament and the Council and the Measuring Instruments Directive numbered 2014/32/AB published in the Official Journal dated 29.06.2016 and number 29757 of Turkish Republic.

9. Annexes

Annex-1: Illustrative pictures of the water meter Annex-2: Demonstration of Sealing Annex-3: Marking Annex 4: Meter Dimensions



Sayfa 5 / 10



Certificate No:1783-MID-065/Rev. 00

Annex-1:



Front Picture of Meter



Back Picture of Meter



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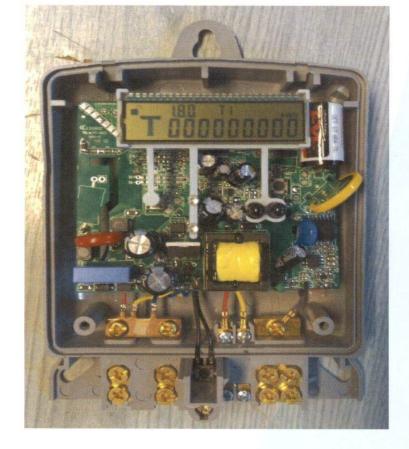
Sayfa 6 / 10



Certificate No:1783-MID-065/Rev. 00



Right View Picture Of Meter



Inside view of the Meter







Electronic Card Back View

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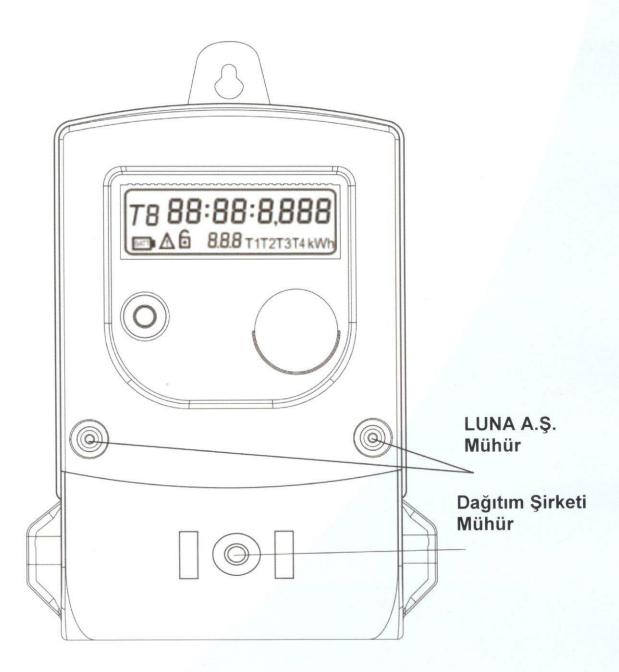
Sayfa 7 / 10



Certificate No:1783-MID-065/Rev. 00

Annex-2:

Sealing





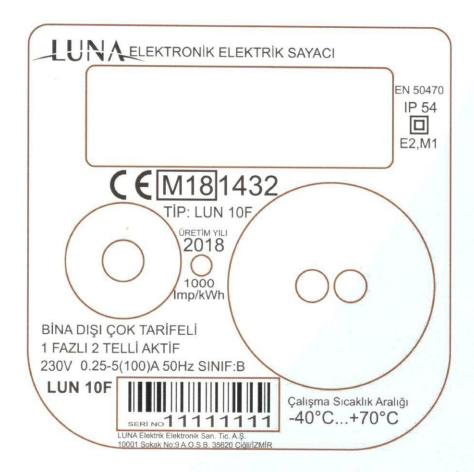
Sayfa 8 / 10



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Annex 3 :

Marking





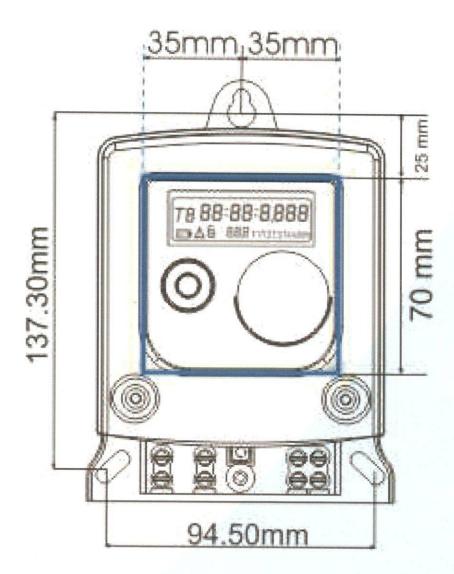
Sayfa 9 / 10



Certificate No:1783-MID-065/Rev. 00

Annex 4 :

Meter Dimensions





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