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Work instructions WI-2

Requesting and managing meter codes

Part of the

Implementation Provisions for Meter Pool Management

(version 3.0, January 2015)

Version: 4.0
Arnhem, March 2015

Modification overview

Version	Date	Modifications	Author
3.0	January 2014	-	-
4.0	March 2015	Removal description about the coordinator (§5.5.4). Small changes to table of characteristics (Appendix 1 and 2), Addition of the forms to request new meter code kWh- and gas energy meters (Appendix 4 and 5)	PvdH

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Contents

1 INTRODUCTION

A unique meter code is assigned to energy meters which have identical metrological characteristics. These meter codes make it easy to compile homogenous populations for statistic checks of all energy meters in use for gas and electricity, within the framework of the meter pools.

When assigning meter codes, the table of characteristics and information provided by the supplier of the energy meters are used. The coordinator of the meter pools manages an administrative system for assigning meter codes. Adhering to these work instructions ensures that the request, allocation and management of the meter take place correctly.

2 AREA OF APPLICATION

2.1 General provision.

These instructions relate to the energy meters which are in use for small consumer electricity and gas connections and as such fall under the “Uitvoeringsbepalingen Meterparkbeheer KV" (Implementation Regulations for Meter Pool Management).

2.2 Supplier

The supplier of the energy meter requests a meter code from the coordinator, after which this meter code must be added to the name plate in such a way that it is clearly visible and indelible.

Notes: The meter code is added to the meter register of the meter pool participants and is used to determine the inventory files and the monitoring results as part of the meter pool system.

2.3 Gas meters

The meter code must be added to the name plate of the gas meter with a total maximum capacity of 40 m^3/h in such a way that it is clearly visible and indelible.

2.4 kWh meters

The meter code must be added to the name plate of the kWh meter if it is installed at the transfer point, smaller than or equal to 3 x 80 A and is intended for direct connection (without measurement transformers in between), in such a way that it is clearly visible and indelible.

3 STANDARDS AND REFERENCES

These work instructions are a further elaboration of the provisions for the management of the meter codes set out in the “Uitvoeringsbepalingen Meterparkbeheer KV" (Implementation Provisions for Meter Pool Management), Article 4.2: meter code

4 DEFINITIONS

	Description of Regulations[1] *Detailed notes*
Manager	The decision-making committee including all the participants. *The manager acts on behalf of the joint participants and instructs a coordinator to carry out the coordinating work.*
Coordinator	The organisation commissioned by the manager to carry out the coordinating work. *For gas meters (G): Kiwa Gas Technology, www.kiwa.nl.* *For kWh meters (E): KEMA Nederland BV: www.dnvgl.com.*
Participant	A company which manages energy meters and has indicated that it wishes to participate in the joint system of meter pool management. *Regional network managers in their capacity as "managers of energy meters," referred to in these instructions as meter pool managers.*
Table of characteristics	Table listing the characteristics which can affect the metrological properties of energy meters.
Check	The investigation into the operation and accuracy of an energy meter.
Check meter	*- Calibration standard meter, instrument for checking/calibrating kWh meters.*
Test rig	*- System, resources for checking/calibrating gas meters.*
Supplier	*The company which supplies the energy meters to the meter pool manager and carries out or commissions the first compliance test on the meters to be supplied (initial inspection).*

[1] The operative "Reglement voor het meterparkbeheer van in gebruik zijnde energiehoeveelheidsmeters voor kleinverbruikaansluitingen" (Regulations for meter pool management of energy meters for small consumer connections currently in use)

5 PROVISIONS FOR REQUESTING AND MANAGING METER CODES

5.1 General

In this chapter, the conditions for issuing meter codes are laid down, along with the attendant obligations for the supplier. These shall in any event consist of:

- Informing the coordinator, accurately, completely and in time with regard to matters which may reasonably be assumed to affect the issuance of a meter code.

- Providing a sample of every meter to which a meter code has been assigned, in order to give the coordinator the opportunity to establish conformance by taking a sample from the meters in the field.

5.2 Compliance and sanctions

5.2.1 If a supplier fails to meet the obligations set out in these work instructions, a meter code already assigned may be revoked, following a prior warning and if no meters have yet been installed.

5.2.2 If an energy meter to which a meter code has been assigned has not been added to the meter register of one of the participating parties in the meter pool within three years after being assigned, the meter code may be revoked following prior notification.

5.2.3 The coordinator shall provide notification of the revocation of a meter code by means of (at least) publication on the coordinator's website.

5.3 General requirements for the request

5.3.1 The meters to which meter codes are assigned must comply in terms of types with the inspection requirements set out in the applicable standards (national standards, European standards and IEC standards).

5.3.2 Compliance with the requirement set out in article 5.3.1 must be demonstrated by a report issued by a body appointed by the national

government or the European Commission to conduct the tests etc. which are part of the type inspection referred to.

5.3.3 For meters which fall under the regime of the Metrology Act, the report referred to in 5.3.2 must consist of:

A "EC type examination certificate" or "EC design examination certificate," issued by the registered body.

B "Certificate/notification quality system," issued by the registered body.

C "Declaration of conformity," issued by the manufacturer.

5.4 Request for new meter code (process description)

5.4.1 For each request for a new meter code, the supplier shall provide the coordinator with the data referred to in 5.4.2 to 5.4.6.

5.4.2 Request form completed in full. This form shall be made available by the coordinator through its website.

Note:

An "EC type examination certificate" or EC design examination certificate" issued by the registered body (see also 5.3.3) can cover several versions of an energy meter. For each version, a separate request form of the coordinator, available from the website, must be completed in full.

5.4.3 Acceptance documents (including the associated documentation folders/test results). See also 5.3.3. The documentation shall always comprise a copy of the signed version of a document (not a draft).

5.4.4 Product information. This product information shall consist of at least:

- Brochures
- Manual with test procedures and conditions
- The version number(s) of software + CRC (Cyclic Redundancy Check)
- A list of the following documents including date, version number and name of document:
    - Schematics
    - Bill Of Materials (B.O.M.)
    - PCB drawings

The supplier/manufacturer must file the list with all the documents cited.

If there are changes, an amended list of documents must be filed. These must be made available at the coordinator's request.

The supplier/manufacturer shall make all documentation referred to in 5.4.4 available to the coordinator for inspection in the following situations:
• For a meter code request relating to a revision of the acceptance.
• For homogeneity checks, for the definition of sub-populations and in case of problems observed in practice.

5.4.5 The documentation requested in 5.4.2 to 5.4.4 must be supplied to the coordinator in digital form by e-mail.

5.4.6 Sample of the meter. When sending in the meters, a degree of care must be observed appropriate to the nature and specific properties of the meter. The coordinator shall state on its website the address where the supplier is to send the meter.

A sample of the meter must be supplied to the coordinator with:
- the correct statutory notices.
- documentation and associated hardware/software necessary for testing the meter. If the supplementary hardware/software is necessary, this must be installed in the meter or made available for the performance of tests in another manner.

5.4.7 The issue of a meter code shall be confirmed to the supplier in writing. This confirmation shall contain at least the applicable characteristics from the characteristics table (see appendix 1 or 2), as well as the meter code.

5.4.8 The supplier shall inform the coordinator if the production of a meter for which a meter code has been issued is halted. Any resumption of production shall also be reported.

5.4.9 When a meter code has been assigned, it will be added to the "Summary of meter codes issued". This summary will be published on the website of the coordinator.

5.5 Modification of meters with an assigned meter code

5.5.1 The supplier shall report to the coordinator:

- changes to one or more characteristics of a meter for which a meter code has been issued (in accordance with the characteristics table) or to the other characteristics recorded with the meter code (see 5.4.2-5.4.6). This is also applicable to all characteristics filled in on the request form.
- changes to the meter leading to a revision of an existing acceptance.
- other changes which may affect the metrological properties of a meter for which a meter code has been issued.

5.5.2 For each change/revision to the meter as referred to in 5.5.1, the supplier shall provide the relevant data to the coordinator as referred to in 5.4.2 to 5.4.6.

5.5.3 The supplier shall issue a report of the change made for every change/revision. The coordinator may request additional information based on this change/revision.

5.5.4 The coordinator shall confirm to the supplier in writing whether a new meter code will be assigned or whether the previously applied meter code will be maintained.
In case the meter code will be maintained but the type ID of meter or characteristics of the meter changes, which are not stated in Appendices 1 or 2, the coordinator will adjust the type-description of the meter so that that the old and the new characteristic(s) are recognizable (usually by using parentheses). The coordinator shall inform the manufacturer and implement the modifications into MPS.
In case a new meter code is assigned, at least the characteristics from the characteristics table (see appendix 1 or 2) shall be stated in addition to the meter code. If the supplier brings a version onto the market which deviates from the specifications listed in the summary, a new meter code has to be requested.

5.5.5 The supplier shall inform the coordinator if the production of a meter for which the meter code has been issued is halted.

5.5.6 An assigned meter code will be added to the “Summary of meter codes issued”. This summary will be published on the website of the coordinator.

6 FINAL PROVISIONS

Identifying deviations

The coordinator shall be informed directly if deviations are identified or doubts exist about the meter code/population classification in use – for example, possible non-homogeneities. The results of the other processes with regard to the meter pool management (check one year after construction, defects registrations, additional checks and analysis for population decisions and population recommendations) may give rise to adjustments.

7 APPENDICES

1 Table of characteristics of kWh energy meters
2 Table of characteristics of gas energy meters
3 "Uitvoeringsbepalingen" (Implementing Provisions) 4.2: meter code
4 Request form meter code kWh energy meters
5 Request form meter code gas energy meters

Appendix 1 Table of characteristics of kWh energy meters

The table below is taken from the Meter Pool Management Provisions

Table 1: Table of characteristics of kWh energy meters (from the Meter Pool Management Provisions)

	Description	Notes	Characteristic values
1	Manufacturer	Name of manufacturer	Name of manufacturer
2	Type of energy meter		Multiple-choice field: 1-phase kWh meter static 1-phase kWh meter induction 3-phase kWh meter static 3-phase kWh meter induction Multi-phase kWh meter static Multi-phase kWh meter induction
3	Type	Type as stated on the name plate	Free text field
4	Class	Class as stated on the name plate	"IJkregeling": class 1 or 2 MID: class A or B
5	Reference current	I_{ref} / I_b	Number in Amperes
6	Maximum current	I_{max}	Number in Amperes
7	Minimum current	I_{min}	Number in Amperes
8	Constant		Number
9	MID acceptance	Acceptance or revised acceptance by Notified Body	Acceptance number
10	Software metrological part	Version number (provided by manufacturer)	Free text field
11	Hardware metrological part	Version number (provided by manufacturer)	Free text field
12	Impulse output (only for induction meters)	Impulse output present?	Y/N
13	Reverse running stop (only for induction meters)	Reverse running stop present?	Y/N
14	Number of counters	1, 2, etc.	Number - number
15	Rotating field (phase sequence)		Left, right or both
16	Power supply to communication module		Internal or external
17	Disconnect switch		Y/N

In addition to the characteristics in table 1, the manufacturer shall submit (and register) some non-distinctive characteristics, by requesting a meter code of kWh energy meters. These characteristics are included in the request form meter code kWh energy meters (see appendix 4).

Appendix 2 Table of characteristics of gas energy meters

The table below is taken from the Meter Pool Management Regulations

Table 2: Table of characteristics of gas energy meters (from the Meter Pool Management Regulations)

	Description	Notes	Characteristic values
1	Manufacturer	Name of manufacturer	Name of manufacturer
2	Type of energy meter		Multiple-choice field: Diaphragm gas meter Ultrasonic gas meter Rotary gas meter Turbine gas meter
3	Type[2]	Type as stated on the name plate	Free text field
4	Class	Accuracy class as stated on the name plate	"IJkregeling": class 1 or 2 MID: class 1 or 1.5
5	Transitional flow	Q_t	Number in m^3/hour
6	Maximum flow	Q_{max}	Number in m^3/hour
7	Minimum flow	Q_{min}	Number in m^3/hour
8	Cyclic volume (only for diaphragm meters)	Volume	Number in dm^3
9	Temperature conversion	Energy meter has built-in temperature compensation?	Y/N
10	Pressure conversion	Energy meter has built-in pressure compensation?	Y/N
11	MID acceptance	Acceptance or revised acceptance by Notified Body	Acceptance number
12	Software version metrological part	Version number (provided by manufacturer)	Free text field[3]
13	Hardware version metrological part	Version number (provided by manufacturer	Free text field

In addition to the characteristics in table 2, the manufacturer shall submit (and register) some non-distinctive characteristics, by requesting a meter code of gas energy meters. These characteristics are included in the request form meter code gas energy meters. (see appendix 5).

[2] The description of type, printed on the name plate of the meter, is not per definition a distinctive characteristic of the meter code.

[3] Any update(s) and change(s) in the software that effects the metrological software, is considered to be a software change which are to be submitted (and registered). (For example INI-file)

Appendix 3 Relevant articles from Implementation Provisions for Meter Pool Management article 4.2: meter code

The articles which are applicable to this subject have been taken from the Implementation Provisions in their entirety.

Implementation Provisions Article 4.2.3.2:

> *"On the instructions of the manager, the coordinator shall inform the supplier/manufacturer regarding the management of and the request for the meter code. The coordinator shall consider the request for a meter code and only for those meters which will be supplied to the participants."*

Implementation Provisions Article 4.2.3.3:

> *"The coordinator shall periodically inform the participants regarding the manner in which the meters are coded and the participants shall record the meter code in their meter register for each meter they manage. The participants periodically receive from the coordinator a file containing all meter codes issued by the coordinator."*

Appendix 4 Request form meter code kWh energy meters

KEMA

TIC-January 7th, 2015-RRoe

KEMA meter code allocation form

Applicant

Company : _____

Address : _____

Postal code - City : _____

kWh-meter

EC-type (design)

examination cert. number : _____ (for example T10097/5 or 09-5021)

single-phase, 2 wire. : yes / no _____ (Graphical symbol marked on the name plate)

three-phase, 3 wire : yes / no _____ (Graphical symbol marked on the name plate)

three-phase, 4 wire : yes / no _____ (Graphical symbol marked on the name plate)

Meter type [1] : _____

Manufacturer [2] : _____

Type ID[3] : _____

applicable for both left (RTS) and clockwise rotating (RST) connection : no / yes, please attach the test results_____

U_{ref} : _____

I_{min} : _____

$I_{ref}(I_{basic})$: _____

I_{max} according to the approval. : _____

I_{max} marked on the name plate: _____

I_{max} terminal block : _____

Meter constant : _____

Accuracy Class marked on the name plate : _____ (for example class A)

Import / Export? [4] : yes / no

Register : display / mechanical register

Explanation:

1) eg single-phase static kWh-meter.
2) Manufacturer as stated on the meter/switch.
3) Type ID as stated on the meter/switch
4) yes, if meter registers both energy directions
5) The specified operating temperature range for which the meter is intended
6) in some cases the circuit breaker is optional (can be removed). In that case the answer is yes

KEMA Nederland B.V. Utrechtseweg 310, 6812 AR Arnhem Postbus 9035, 6800 ET Arnhem
T (026) 3 56 91 11 F (026) 4 42 62 11 www.dnvgl.com Handelsregister Arnhem 09080262

KEMA

Environment

Mechanical environment class : _____ (for example class M1)

Electromagnetic environment class : _____ (for example class E2)

Temperature range [5] : _____ (for example +5°C ....+30°C)

registration numbers

Software reg. number : _____ (Sofware reg./version number(s))

Hardware reg. number : _____ (pcb reg./version number(s))

Options

Pulse input (1) optional : yes / no

Relay (optional) : yes / no

So (optional) : yes / no

Anti tampering (general) : yes / no

Magnetic tamper : yes / no

Circuit breaker

Circuit breaker : yes / no

Integral part of the meter[6] : yes / no _____

in case the breaker is not an integral part of the meter, is it optional? yes / no

Manufacturer [2] : _____

Type ID[3] : _____

U_c (rated breaking voltage) : _____

I_c (rated breaking current) : _____

Utilisation category : _____ (for example UC3)

In case of a breaker:

Single phase meter : phase / phase & neutral

Poly phase meter : one breaker (3 phase) / three breakers

Explanation:

1) eg single-phase static kWh-meter.
2) Manufacturer as stated on the meter/switch.
3) Type ID as stated on the meter/ switch
4) yes, if meter registers both energy directions
5) The specified operating temperature range for which the meter is intended
6) in some cases the circuit breaker is optional (can be removed). In that case the answer is yes

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KEMA

Communication

Communication : _____ (for example PLC, M-bus,GPRS)

Modular communication : no / yes

In case of modular com.:

supplied by : internal 230V / external 230V

Manufacturer [2] : _____

Type ID[3] : _____

Production location

Assembly on one location:

Location : _____ (Country, City)

Assembly on more than one location:

Location 1 : _____ (Country, City)

Location 2 : _____ (Country, City)

Range of serial numbers : _____ (for example: 5100000-".....")

(the manufacturer informs the coordinator in case the production ends)

Year of production starting

(marked on the name plate) : _____ (for example: 2011-".....")

(the manufacturer informs the coordinator in case the production ends).

Explanation:

1) e.g. single-phase static0020kWh-meter.
2) Manufacturer as stated on the meter/switch.
3) Type ID as stated on the meter/switch.
4) yes, if meter registers both energy directions
5) The specified operating temperature range for which the meter is intended
6) in some cases the circuit breaker is optional (can be removed). In that case the answer is yes

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Additional information

The kWh-meter meets the requirements:

NTA	Version :	(for example: "2.2")
DSMR	Version :	(for example: "4.0")
Other	:	

Delivering

To which companies are you planning to deliver? :

Remarks :

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Appendix 5 Request form meter code gas energy meters

Metercode request / mutation form for residential gas meters ≤ 40 m3/h Versie 1.21-Eng (2015-02-11)

Based on the Reglement Meterparkbeheer KV, Uitvoeringsbepalingen Meterparkbeheer KV and working instruction WI-2

Number	Property	Variable	Length	Choice options	Meter 1	Meter2	Meter 3
1	Metercode	Numeric	5	To be completed by Kiwa			
2	Meter type	Text	1	B(diaphragm), U(Ultrasonic)			
3	Measuring principle	Text	2	B(diaphragm), U(Ultrasonic)			
4	Manufacturer	Numeric	2	Manufacturer code			
5	Type description	Text	30				
6	Start production	Numeric	4	Year			
7	End of production	Numeric	4	Year			
8	Class	Numeric	3	1, 1.5, 2			
9	Flow Qmin	Numeric	5,2	m3/h			
10	Flow Qt	Numeric	5,2	m3/h			
11	Flow (Qmax)	Numeric	5,2	m3/h			
12	Temperature conversion (TC)	Text	15	Ja (0°C), Ja (15°C), Nee			
13	Pressure conversion (PC)	Text	15	Ja (1041.25), Ja (1043.50), Ja (P-sensor), Nee			
14	Cyclic volume	Numeric	5,2	dm3			
15	(MID) certificate number	Text	20				
16	Software version metr.part	Text	30				
17	Hardware version metr.part	Text	30				
18	G-value	Text	10				
19	DSMR version	Text	10				
20	Electronic display	Text	1	J(Yes)/N(No)			
21	- Visible resolution	Numeric	1,5	m3 (only for meters with digital display)			
22	- Internal resolution	Numeric	1,5	m3 (only for meters with digital display)			
23	- Update frequentiy of display	Numeric	2,1	sec (only for meters with digital display)			
24	Remarks	Text	50				

Also enclose:

Certification documents
Product information
-Brochures
-Manual with testing procedure
-Software version + CRC
-A list containing information of the following documents
Schematics
Bill Of Materials (B.O.M.)
PCB drawings
-Sample of the meter

Please send to:

Gasmeterpool
email: gasmeterpool@kiwa.nl
Postbus 50, 7300 AC Apeldoorn
Wilmersdorf 50, 7327 AC APELDOORN, NETHERLANDS
Tel: +31(0)55 5393 478

Company info
Contact name
Function
PO box
Postal code
City
Country
Phone number
Fax
Email
Date