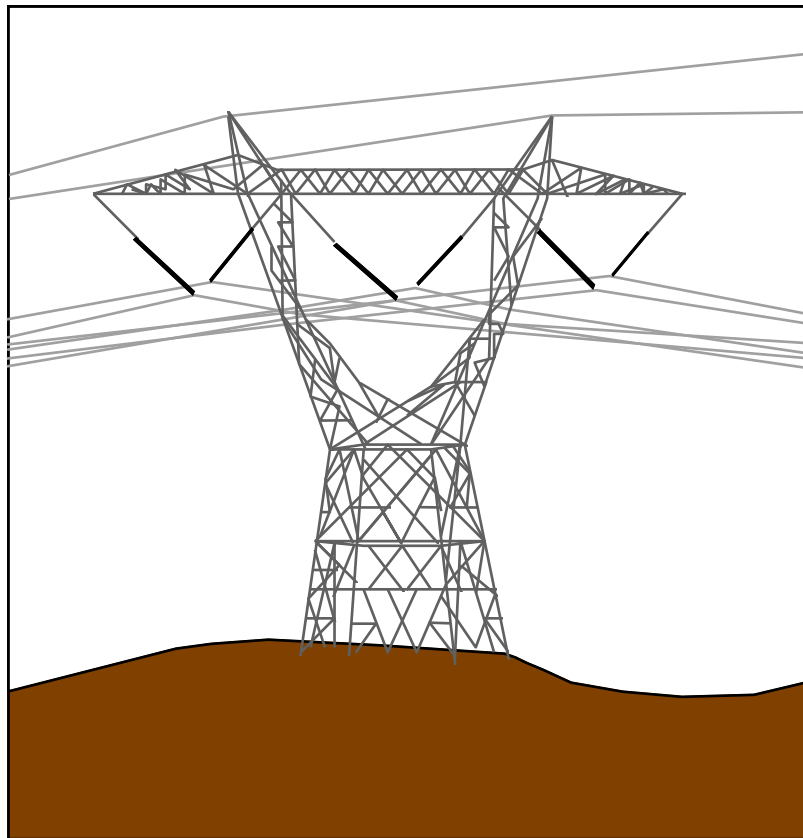


Message handbook for Ediel

Implementation guide for METERED SERVICES CONSUMPTION REPORT



EDIFACT-message: Extended MSCONS
EDIFACT-version: D
EDIFACT-release: 96A
IG-status: RFC: (Request for comments) to Nordic ETC and Nordic Ediel Group.
Please send comments to ove.nesvik@edisys.no within May 18th.
IG-version: Planned as 2.4
IG-revision: Planned as D
IG-date: April 20th, 2005

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1. INTRODUCTION

This document is an Implementation Guide (IG) for the Metered Services Consumption Report message, to be used in the power industry. The IG describes the EDIFACT-message MSCONS (Metered Services Consumption Report) in detail. The message is sent between parties in the power industry and is used for reporting metered values after consumption has taken place.

Note: the message type used for the Metered Services Consumption Report is extended in comparison to the EDIFACT UNSM message MSCONS, with extra MEA and CUX segments in segment group 9.

This IG is a part of the "Message handbook for Ediel", which contains a set of IG's for different messages used in the power industry and a functional description, which contains common descriptions for the different IG's. In the future several new IG's are planned.

In addition a Functional description is available, which contains common descriptions for the different Implementation Guides. This includes relationships between the different message types, use of codes and code lists, special conditions between countries (such as use of time zones), terms and notation, use of header and trailer segments (UNB and UNZ), etc.

2. GENERAL DESCRIPTION OF THE MSCONS MESSAGE

2.1. Metered Services Consumption Report message

The message type used for the Metered Services Consumption Report is based upon the EDIFACT message MSCONS. The message description is taken from the D.97A Directory since this is the first EDIFACT Directory where MSCONS is present. The segment descriptions, data element descriptions, code lists, etc. are taken from the D.96A Directory, as are the rest of the IG's from Ediel.

The EDIFACT message is expanded with MEA and CUX segments in segment group 9.

2.2. Functional Definition

The Metered Services Consumption Report is a message sent between parties in the power industry, providing consumption and/or associated technical information at location(s) for product(s) or service(s), where the supply is metered.

2.3. Principles

The following principles apply to the Metered Services Consumption Report:

- At least one delivery party (premise) shall be identified per message.
- Each Metered Services Consumption Report will define the period of time for which the details contained are valid.
- A Metered Services Consumption Report may be used to provide consumption information which may directly relate to other business functions, e. g. invoicing or process control.
- Metered Services Consumption Reports will be provided for premises as defined by trading partners.
- Locations, products and/or services, and meters shall be identified wherever possible within the report using codes to facilitate processing.
- The Metered Services Consumption Report may be transmitted at any time and may be related directly to either delivery(ies) and/or an invoice(s).
 - A Metered Services Consumption Report when used to support the financial information contained in an invoice may relate to one invoice only.
 - A Metered Services Consumption Report when used to indicate consumption or quality information may relate to one or many delivery parties (premises).

The information is transferred as:

- General information.
- Description of the serial Id.
- Description of the product.
- Information regarding the quantity and time period.

3. REFERENCES

This Implementation guide is based on the following documents.

- [1] **Norsk veiledning i bruk av EDIFACT**, version 2.0, November 1991 with addition of January 1994.
- [2] **UN/EDIFACT Draft directory**, D.96A
- [3] **Message handbook for Ediel, Functional description**
- [4] **ISO 9735**, version 2, 1990.11.01
- [5] **UN/EDIFACT Draft directory**, D.97A

3.1. Precedence

If there should be any conflict regarding this Implementation guide or between this Implementation guide and other documents, the following precedence shall be used:

- 1 UN/EDIFACT Draft directory, D.96A [2]
- 2 The Functional description [3]
- 3 This Implementation guide.

In this Implementation guide the EDIFACT message type is described in different ways. If there should be any conflict regarding the different descriptions, the detailed description in the last chapter should be used.

4. QUALITY ASSURANCE

This document is written by EdiSys AS on behalf of Ediel. Members of the Ediel-organisation have taken part in its development throughout.

4.1. Version number

The Implementation Guide will have 2 levels of version numbering. This will be Version and Release. In addition there will be a Revision number.

- The Version number (first number) will be updated when there have been major changes like new versions of the message type.
- The Release number will be updated when there have been small changes to the IG, like adding new segments, new data elements etc. within the EDIFACT directory. These changes shall not influence existing implementations.
- The Revision number will be updated when there have been minor changes, like correction of examples, adding new codes etc. These changes shall not influence existing implementations.

4.2. Corrections from earlier versions

In addition to minor text corrections the following changes have been made to this version of the IG:

Corrections from version 2.4.C:

- The code “Z06 = Metered data collector”, specifying which party that has collected the date, is added to SG11/CCI.
- The corresponding codes “1 = Grid Company” and “2 = Customer” are added to SG11/MEA.

Corrections from version 2.4.B:

- The code “9, Update of master data, metering point, requiring meter reading” is added to SG11/MEA/C174 6314. This code is equivalent to the code "E64" in UTILTS. The code is numeric in MSCONS since this is required by the EDIFACT element 6314 (n..18).
- The codes E01, E02 and E05 are removed from SG11/MEA/C174 6314, since they not are used in any business processes.

Corrections from version 2.4.A:

- The number of repetitions of SG11 is increased from 4 to 5.

Corrections from version 2.3.H:

- The currencies FIM, DEM and NLG are removed.
- It is opened for the usage of UNH/0068 (COMMON ACCESS REFERENCE).
- The code “305, ETSO (European Transmission System Operator)” is added as code list responsible together with EAN, where relevant.

- The code “DK, Danish Ediel group” is added as code list responsible in all relevant segments where code list responsibilities are used.
- The usage of data element UNH/S009 0057 is changed. It is now possible to add a version number of the relevant national user guide.
- The code list for SG9/MEA/6411 is enhanced with new codes.
- The code list for SG11/CCI+MEA is enhanced with a new code, Z15 kWh/m3.

Corrections from version 2.3.G:

- The code “8, move” is added to MSCONS/SG11/CCI/MEA
- The code “TNE, Tonne (metric ton)” is added to MSCONS/SG9/MEA
- The code “DK, Danish Ediel group” is added to LOC and LIN.
- A reference to “ISO 3166-1 two alpha country code” is added to NAD.

Corrections from version 2.3.F:

- The code “LI, Line item reference number” is added to SG7/RFF.

Corrections from version 2.3.E:

- A reference to the Functional description regarding generic product codes is added to the LIN segment.
- A new code, “Z04 – Delta value” is added to the QTY segment.

Corrections from version 2.3.D:

- The codes “Z01 - process data report, meter stands” and “Z02 -process data report, time series” are added to BGM/SG0.
- The codes A97 and MQH are added to MEA/SG9.

Corrections from version 2.3.C:

- The code “MG, Meter unit number” is added to RFF/SG7.

Corrections from version 2.3.B:

- A comment is added to the MEA segment in SG8 stating that the measure unit qualifiers MWh/h, kWh/h, MVAh/h and kVAh/h not should be used in new applications.
- The code “7, Change of balance responsible” is added to MEA/SG11.

Corrections from version 2.3.A:

- The classification of the DTM in segment group 10 is changed from "R" to "D".
- Codes for “Meter time frame” are added to the CCI and MEA segments in SG11.
- Codes for “Reason for meter reading” are added to the CCI and MEA segments in SG11.

Corrections from version 2.2.6:

- DE, NL and GB are added as country codes in the NAD segment.
- Some general paragraphs from chapter 1 are removed. This information will be found in the Functional description.
- The text in chapter 4.1, Version number, is changed to be more compliant with practice.
- The classification of data element 1225 in BGM is changed from “R” to “O”.
- The code Z11, Z12, Z13 and Z14 are removed from MEA/SG9.
- The codes D54 – Global solar radiation and LTR – Litre are added to segment MEA/SG9.

- New codes are added to DTM/SG10 to be more EAN compliant.
- The Implementation Guide is enhanced so that it can be used for reporting of meter stands, estimated annual volume etc. The enhancements will not influence the use of the IG for other purposes today. The following additions are made to the IG:
 - New codes in segment QTY in segment group 10 for reporting meter stands etc.
 - New codes in segment DTM in segment group 10 for reporting meter reading dates, etc.
 - Addition of segment group 11 with a CCI and a MEA segment for reporting the number of digits and the constant of the meter.
- The code “EUR - Euro” is added to the CUX segment. The CUX segment is still planned to be removed in the next version of the Ediel IG’s.

Corrections from version 2.2.5:

- The code “EKS Elkraft” has been added to the NAD and LOC segments in segment group 6 and to the LIN segment in segment group 9.

Corrections from version 2.2.4:

- The classification of segment group 10 is corrected to be Mandatory (M).

Corrections from version 2.2.3:

- The classification of segment group 7 is corrected to be Optional (O).

Corrections from version 2.2.2:

- Only text corrections.

Corrections from version 2.2.1:

- The code P1 for percent is added to the MEA segment in SG 9.

Corrections from version 2.1.0 and 2.2.0:

- The code “ELT” for Eltra and the code “9” for EAN are added in several segments as code list responsible agencies.
- The segment MEA in SG 9 is planned to be removed in the next version of the Ediel IG. The “Measure unit” will then be moved to the QTY segment in SG 10.
- The segment CUX in SG 9 is planned to be removed in the next version of the Ediel IG.
- The codes K3, KVR, Z11, Z12, Z13, Z14 and Z15 are added to the MEA segment in SG 9.
- The codes Z01, Z02, Z04, Z11, Z12, Z13 and Z15 will probably be removed as measure unit codes in the next version of the Ediel IG’s.

Corrections from version 2.0.0:

- The code for data element S009 0052 in the UNH segment is changed from “0” to “D”.
- The “method B” used for defining time period is no longer valid. The processing period is split into start, stop and time zone. The codes ZZA and ZZB in the DTM segment in segment group 0 are removed and replaced by the codes 163, 164 and ZZZ.
- The code “ZZZ” in the NAD segment in segment group 5 is replaced by the code “XX”.
- The code “ZZZ” in the RFF segment in segment group 7 is replaced by the code “ACD”.
- The code “ZZZ” in the MEA segment in segment group 9 is replaced by the code “Z10”.
- The codes “Z10” and “Z24” are removed from the DTM segment in segment group 10.

- The code “94” is added to the QTY segment in segment group 10.

5. SPECIAL CONDITIONS

5.1. Use of the MEA and CUX segments in segment group 9

The following rules apply to the use of the MEA and CUX segments in segment group 9:

- If the MEA and CUX segments are *not* used the values reported should be MWh/h.
- If both the MEA and CUX segments are used the values reported should be «Currency/measure unit» (i. e. SEK/MWh).
- If data element C174 6411 in the MEA segment has the code «Z10» the values reported should be prices or amounts with Currency defined in the CUX segment.
- If only the CUX segment is used the values reported should be Currency/MWh/h.

6. OVERVIEW OF THE MESSAGE

6.1. Data model for the Metered Services Consumption Report

Shown below is a data model for the Metered Services Consumption Report message:

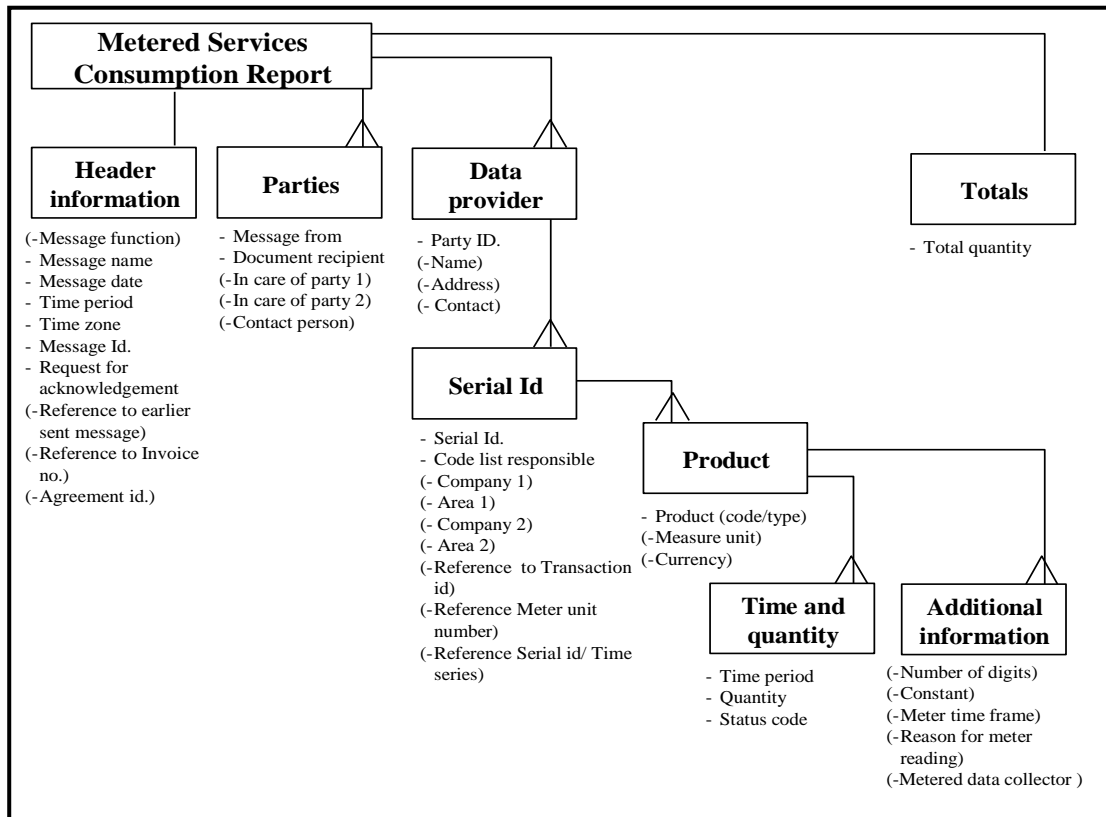


Figure 1 Data model for Metered Services Consumption Report

The Attributes in parentheses are conditional attributes and are not necessarily transferred.

6.2. Cue list

Below is a table describing the EDIFACT message and the relationships to the attributes in the data model.

Note: the message type used for the Metered Services Consumption Report is extended in comparison to the EDIFACT UNSM message MSCONS, with extra MEA and CUX segments in segment group 9.

General information about the message			
UNH	M	1	Message reference Message type
BGM	M	1	Message name Message Id. (Message function) Request for acknowledgement
DTM	M	4	Message date Time period start Time period stop Time zone
References			
SG. 1	O	3	
RFF	M	1	(Reference to earlier sent message) (Reference to Invoice no.) (Agreement Id.)
Parties			
SG. 2	R	4	
NAD	M	1	Message from Document recipient (In care of party 1) (In care of party 2)
Contact person			
SG. 4	O	1	
CTA	M	1	(Contact person)
UNS	M	1	

Data Provider			
SG. 5	M	99999	
NAD	M	1	Party Id. (Data Provider) (Name) (Address) (Contact)
Meter location			
SG. 6	M	99999	
LOC	M	1	Serial Id. Code list responsible (Company 1) (Area 1) (Company 2) (Area 2)
Other time series			
SG. 7	O	3	
RFF	M	1	(Reference to Transaction id) (Reference to Meter unit number) (Reference to Serial id/ Time series)
Product			
SG. 9	R	99	
LIN	M	1	Product (code/type)
MEA	D	1	(Measurement unit)
CUX	D	1	(Currency)
Time/quantity			
SG. 10	M	9999	
QTY	M	1	Quantity Status code
DTM	D	2	Time period
Additional information			
SG. 11	O	5	
CCI	M	1	Characteristic (for a meter)
MEA	R	1	Characteristic value
General information about the message (Trailer)			
CNT	R	1	Total quantity
UNT	M	1	Message trailer

As a minimum, the segment groups (with corresponding segments) marked with R or M have to be used in every message.

6.3. Message diagram

The Message diagram below shows the subset of the standard EDIFACT message that is used in this IG. All segments and segment groups are shown according to the classification in this subset. For a complete overview of the EDIFACT standard message, please see the next chapter (segment table).

Note: the message type used for the Metered Services Consumption Report is extended in comparison to the EDIFACT UNSM message MSCONS, with extra MEA and CUX segments in segment group 9.

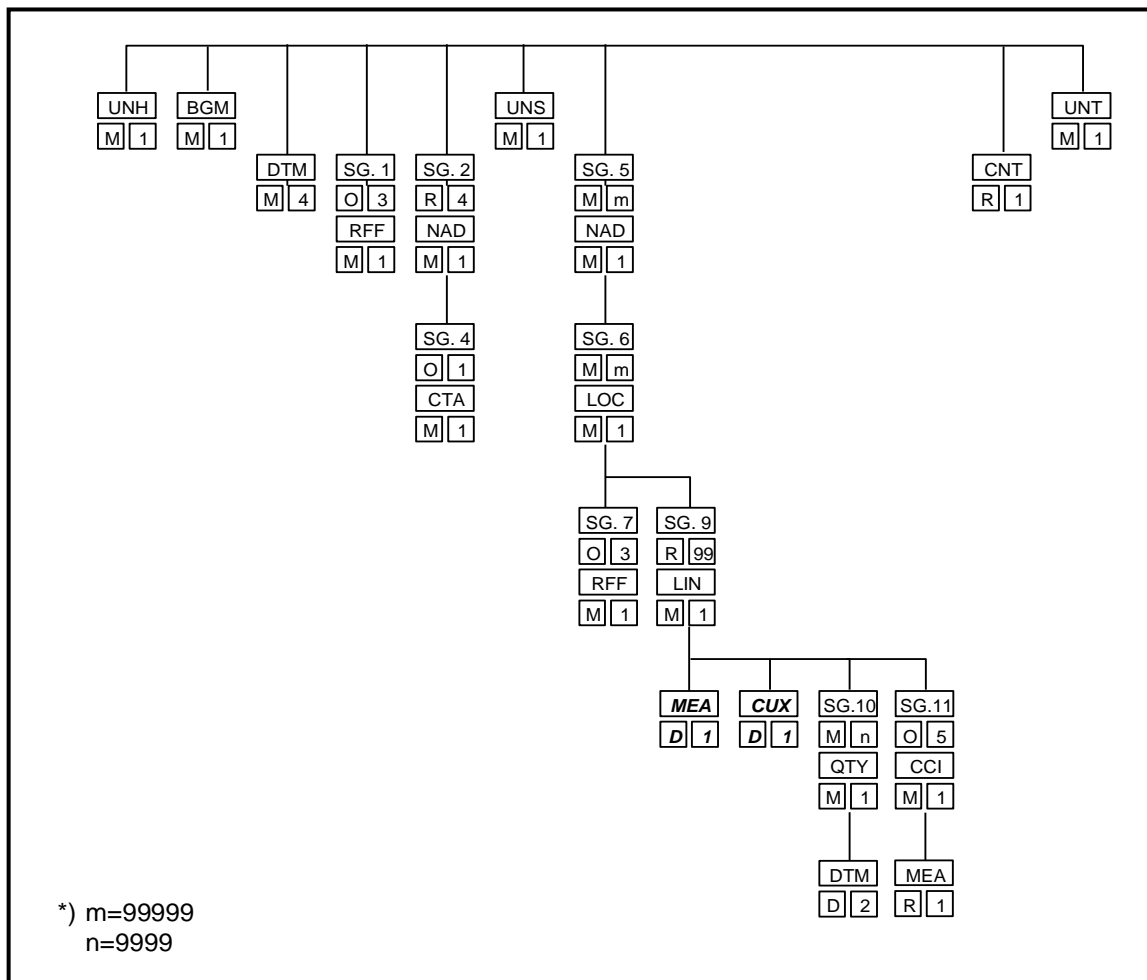


Figure 2 Message diagram for the Metered Services Consumption Report message

6.4. Segment table

In this chapter the segment table for the MSCONS message, version 1, release 1, is shown as it is described in version D, release 97A of the EDIFACT directory. D.97A is the first directory which contains the MSCONS message. To standardise the directory used in Ediel the D.96A directory is used for segments, data elements, code lists, etc. The segments and segment groups that are used in this IG are shown in bold type.

There are some differences between the earlier status 0 message described by EAN and the earlier status 0 message used by Ediel:

- The D.96A version from EAN has no DTM segment in segment group 3.
- The D.96A version from EAN has an MEA-segment in segment group 8.
- A NAD and a MOA segment are added in segment group 9 in D.97A.

Note: the message type used for the Metered Services Consumption Report is extended in comparison to the EDIFACT UNSM message MSCONS, with extra MEA and CUX segments in segment group 9.

HEADER SECTION

UNH Message header	M	1	
BGM Beginning of message	M	1	
DTM Date/time/period	M	9	
----- Segment group 1 -----	C	9	-----+
RFF Reference	M	1	
DTM Date/time/period	C	9	-----+
----- Segment group 2 -----	C	99	-----+
NAD Name and address	M	1	
----- Segment group 3 -----	C	9	-----+
RFF Reference	M	1	
DTM Date/time/period	C	9	-----+
----- Segment group 4 -----	C	9	-----+
CTA Contact information	M	1	
COM Communication contact	C	9	-----+
UNS Section control	M	1	

DETAIL SECTION

----- Segment group 5 -----	M	99999	-----+
NAD Name and address	M	1	
----- Segment group 6 -----	M	99999	-----+
LOC Place/location identification	M	1	
DTM Date/time/period	C	9	
----- Segment group 7 -----	C	99	-----+
RFF Reference	M	1	
DTM Date/time/period	C	9	-----+
----- Segment group 8 -----	C	99	-----+
CCI Characteristic/Class ID	M	1	
DTM Date/time/period	C	99	-----+
----- Segment group 9 -----	C	99999	-----+
LIN Line item	M	1	
PIA Additional product id	C	9	
IMD Item description	C	9	
MEA Measurements	C	5	
CUX Currencies	C	5	
PRI Price details	C	9	
NAD Name and address	C	9	
MOA Monetary amount	C	9	
----- Segment group 10 -----	M	9999	-----+
QTY Quantity	M	1	
DTM Date/time/period	C	9	-----+
----- Segment group 11 -----	C	99	-----+
CCI Characteristic/Class ID	M	1	
MEA Measurements	C	99	-----+
DTM Date/time/period	C	9	-----+

SUMMARY SECTION

CNT Control total	C	99
UNT Message trailer	M	1

6.5. Description of segments used

The segments and segment groups used in this IG are described below. The description is based on the MSCONS message, version 1, release 1, as described in version D, release 97A of the EDIFACT directory. D.97A is the first directory which contains the MSCONS message. To standardise the directory used in Ediel the D.96A directory is used for segments, data elements, code lists, etc. *The way Ediel uses the segments are described in the next chapter.*

Note: the message type used for the Metered Services Consumption Report is extended in comparison to the EDIFACT UNSM message MSCONS, with extra MEA and CUX segments in segment group 9.

UNH, Message header

A service segment starting and uniquely identifying a message. The message type code for the Metered services consumption report message is MSCONS.

Note: Metered services consumption report messages conforming to this document must contain the following data in segment UNH, composite S009:

Data element 0065 MSCONS
0052 D
0054 96A
0051 ZZ

The code «ZZ» in data element 0051 is used because the message type used for the Metered Services Consumption Report is expanded in comparison to the standard EDIFACT message MSCONS, with extra MEA and CUX segments.

BGM, Beginning of message

A segment by which the sender must uniquely identify the metered services consumption report.

DTM, Date/time/period

A segment specifying the dates, and when relevant, the times related to the whole message. The segment must be specified at least once to specify the message date as allocated by the sender.

Segment group 1: RFF

A group of segments for specifying any references and their dates, valid for the whole report.

RFF, Reference

A segment for the inclusion of any references related to the complete report, e. g. invoice number, contract number.

Segment group 2: NAD-SG4

A group of segments identifying the parties involved in the transaction, reference numbers associated with the parties, and any contact points and numbers.

NAD, Name and address

A segment to identify the party name and address, either by coded identification or in clearform. It is recommended that where possible only the coded form of the party identification should be specified, e. g. the buyer and seller are known to each other, thus only the coded identification is required.

Segment group 4: CTA

A group of segments identifying the contact person or department for trading party and specifying the communication channel and number.

CTA, Contact information

A segment to identify a person or department and their function, to whom communication should be directed.

Detail section

UNS, Section control

A segment placed at the start of the detail section to avoid segment collision.

Segment group 5: NAD-SG6

A group of segments identifying the delivery party (premise) and the meter for which consumption is being reported.

NAD, Name and address

A segment to identify the delivery party (premise) for which the following consumption information is being provided. It is recommended that where possible codes be used to identify the delivery party to facilitate the automatic processing.

Segment group 6: LOC-SG7-SG9

A group of segments identifying the meter being reported, the date of the meter read, associated references, the physical characteristics of the meter, and the product or service for which consumption information is reported.

LOC, Place/location identification

A segment to allow the identification of the meter to which the consumption information relates. It is recommended that where possible codes be used to identify the delivery party to facilitate automatic processing.

Segment group 7: RFF

A group of segments for specifying any references and associated dates valid for the meter identified in the LOC segment.

RFF, Reference

A segment identifying any references related to the meter identified in the LOC segment (e. g. serial number).

Segment group 9: LIN-MEA-CUX-SG10

A group of segments providing details of the metered products or services, quantities, characteristics, and any associated dates.

LIN, Line item

A segment identifying the metered product or service for which consumption information is being provided.

MEA, Measurements

A segment specifying physical measurements of the item to be delivered or has been used.

CUX, Currencies

A segment to indicate currencies.

Segment group 10: QTY-DTM

A group of segments providing details of the meter read, consumption, correction quantities, and associated dates.

QTY, Quantity

A segment identifying the consumption details, e. g. opening meter read, consumption, adjustments (correction).

DTM, Date/time/period

A segment to specify dates related to the previously specified consumption information.

Segment group 11: CCI

A group of segments providing characteristic details, measurements, and dates related to the details for the currently identified line item.

CCI, Characteristic/class id

A segment used to describe the characteristics of the currently identified product or service (e. g. calorific values, chlorine content).

MEA, Measurements

A segment enabling the indication of measurements related to the characteristics identified in the preceding CCI segment.

Summary section

CNT, Control total

A segment by which control totals may be sent by the sender, for checking by the receiver.

UNT, Message trailer

A service segment ending a message, giving the total number of segments in the message and the control reference number of the message.

7. DETAILED DESCRIPTION OF THE MESSAGE

In this chapter all segments and segment groups are specified in detail. In the left column you will find a list of the attributes used.

The EDIFACT segments listed are copies of those defined in the original UN/EDIFACT directory except for data elements defined as conditional (C) which are redefined using the classification described in the Functional Description [3].

Note: the message type used for the Metered Services Consumption Report is extended in comparison to the EDIFACT UNSM message MSCONS, with extra MEA and CUX segments in segment group 9.



MESSAGE: MSCONS

SG 0

Function: The Metered Services Consumption Report is a message sent between parties in the power industry, providing consumption and/or associated technical information at location(s) for product(s) or service(s) where the supply is metered.

Segments: UNH, BGM, DTM

UNH Message header

Function: A service segment to start and identify a message.

Classification: Mandatory (M1).

Comments:

Example: UNH+1+MSCONS:D:96A:ZZ:EDIEL2'

Message-reference

>

Ref.	Name	Cl.	Form.	Description
0062	MESSAGE REFERENCE NUMBER	M	an..14	The message reference uniquely identifies the message in the interchange. This can for instance be done by using a sequence number that identifies each message in the interchange. The first message will have reference no. 1, the second message will have reference 2, etc. The reference can be set to 1 in the first message of the next interchange.
S009	MESSAGE IDENTIFIER	M		
0065	Message type identifier	M	an..6	Code: MSCONS
0052	Message type version number	M	an..3	Code: D
0054	Message type release number	M	an..3	Code: 96A
0051	Controlling agency	M	an..2	Code: ZZ
0057	Association assigned code	R	an..6	Use the code "EDIEL2" if the Ediel IG is implemented in its full version, or a code of the format "E2yyzz" if a national IG is the basis, where: E2 Indicates Ediel version 2 yy ISO 2 letter country code or an abbreviation for an international organisation zz user guide or national implementation guide version number
0068	COMMON ACCESS REFERENCE	O	an..35	May be used to identify a "business transaction" according to national specifications.
S010	STATUS OF THE TRANSFER	X		
0070	Sequence message transfer number	X	n..2	

Message-type

>

	0073	First/last seq. mess. transfer. indicator.	X	a1	
--	------	---	---	----	--

BGM Beginning of message
Function: A segment for the unique identification of the Metered Services Consumption Report, by means of its name and its number.
Classification: Mandatory (M1).
Comments: Data element C002 3055 shall be used if the code not is an official UN/EDIFACT code. I.e. for codes starting with an alphabetic character, such as Z01 or Z02.
Example: BGM+7+AV1234+9+AB'

Ref.	Name	Cl.	Form.	Description
C002	DOCUMENT/MESSAGE NAME	R		
1001	Document/message name, coded	R	an..3	Code: 7 Process data report Z01 process data report, meter stands Z02 process data report, time series
1131	Code list qualifier	X	an..3	
3055	Code list responsible agency, coded	D	an..3	Code: 260 Ediel Nordic forum DK Danish Ediel group
1000	Document/message name	X	an..35	
1004	DOCUMENT/MESSAGE NUMBER	R	an..35	Unique Id. of the message. Shall be unique over time for each party. This Id. Will be returned in an APERAK if APERAK is demanded.
1225	MESSAGE FUNCTION, CODED	O	an..3	Code: 5 Replace of a previously sent message. 9 Original message.
4343	RESPONSE TYPE, CODED	R	an..3	Code: AB Message acknowledgement is required (APERAK). NA No acknowledgement needed

DTM Date/time/period
Function: A segment specifying the date, and the time/period of the document, and the beginning and ending of the processing date/period of the document.
Classification: Mandatory (M4).
Comments: All four repetitions are required. See the Functional description for a description on the use of Time Zone.
Example: DTM+137:199905231205:203'

Message date and Processing date/period

>

Ref.	Name	Cl.	Form.	Description
C507	DATE/TIME/PERIOD	M		
2005	Date/time/period qualifier	M	an..3	Code: 137 Message date 163 Processing start date/time 164 Processing end date/time ZZZ Offset to UTC (GMT)
2380	Date/time/period	R	an..35	Date/time/period
2379	Date/time/period format qualifier	R	an..3	Code: 203 CCYYMMDDHHmm, (137, 163, 164) 805 Hour, (ZZZ)



MESSAGE: MSCONS

SG 1

Function: A group of segments giving references relevant to the whole message, e. g. Agreement Id.
Classification: Optional (O3).
Comments: Only to be used if bilaterally agreed.
Segments: RFF

RFF Reference
Function: A segment for referencing Agreement Id., reference to an earlier sent message or an invoice no.
Classification: Mandatory (M1).
Comments: When referring to an earlier sent message the message Id. in the BGM segment of the relevant previous message is to be used.
Example: RFF+ACW:012345'

Reference

>

Ref.	Name	Cl.	Form.	Description
C506	REFERENCE	M		
1153	Reference qualifier	M	an..3	Code: ACW Ref. no. to previous message CT Contract number (Agreement Id.) IV Invoice number
1154	Reference number	R	an..35	Reference no.
1156	Line number	X	an..6	
4000	Reference version number	X	an..35	



MESSAGE: MSCONS

SG 2

Function: A group of segments identifying names, addresses, locations, and contacts relevant to the whole message.
Classification: Required (R4).
Comments: Two repetitions are required.
Segments: NAD, SG. 4

NAD Name and address
Function: A segment for identifying names and addresses and their functions relevant for the whole message.
Classification: Mandatory (M1).
Comments:

- See the Functional description for a description of the use of data elements C082 1131 and C082 3055.
- Code «FR» and «DO» in data element 3035 are required

Example: NAD+FR+123456789:NO3:82++++OSLO+++NO'

Party Id.

>

Code list responsible

>

Ref.	Name	Cl.	Form.	Description
3035	PARTY QUALIFIER	M	an..3	Code: FR Message from DO Document recipient C1 In care of party no. 1 C2 In care of party no. 2
C082	PARTY IDENTIFICATION DETAILS	R		
3039	Party id identification	M	an..35	Party identification
1131	Code list qualifier	D	an..3	Code: 100 Enhanced party identification 160 Party identification NO3 Company registration no. from «Foretaksregisteret» in Norway
3055	Code list responsible agency, coded	R	an..3	Code: 9 EAN (International Article Numbering association) 82 «Enhetsregisteret» in Norway 305 ETSO (European Transmission System Operator) EDI Other Id. than power plant SLY Finnish Electricity Association SM Nord Pool ASA SVK Svenska Kraftnät
C058	NAME AND ADDRESS	X		
3124	Name and address line	X	an..35	
3124	Name and address line	X	an..35	
3124	Name and address line	X	an..35	
3124	Name and address line	X	an..35	
3124	Name and address line	X	an..35	

Place		C080	PARTY NAME	X		
		3036	Party name	X	an..35	
		3036	Party name	X	an..35	
		3036	Party name	X	an..35	
		3036	Party name	X	an..35	
		3036	Party name	X	an..35	
		3045	Party name format, coded	X	an..3	
>		C059	STREET	X		
		3042	Street and number/P.O. Box	X	an..35	
		3042	Street and number/P.O. Box	X	an..35	
		3042	Street and number/P.O. Box	X	an..35	
Country	>	3164	CITY NAME	O	an..35	Place (for generation of message)
		3229	COUNTRY SUB-ENTITY IDENTIFICATION	X	an..9	
		3251	POSTCODE IDENTIFICATION	X	an..9	
	>	3207	COUNTRY, CODED	O	an..3	Code: Use ISO 3166-1 two alpha country code, e.g.: DK Denmark FI Finland DE Germany NL Netherlands NO Norway SE Sweden GB United Kingdom



MESSAGE: MSCONS

SG 4

Function: A group of segments to identify people, or departments.
Classification: Optional (O1).
Comments: Normally used for sender (code «FR» in NAD, SG. 2).
Segments: CTA

CTA Contact information
Function: A segment to identify the person, or department to whom communication should be directed.
Classification: Mandatory (M1).
Comments: «MR» is used together with «DO» in NAD, SG. 2
 «MS» is used together with «FR» in NAD, SG. 2
 «IC» is used together with «C1» in NAD, SG. 2
Example: CTA+MS+:Ole Olsen'

Ref.	Name	Cl.	Form.	Description
3139	CONTACT FUNCTION, CODED	R	an..3	Code: IC Information contact MR Message recipient contact MS Message sender contact
C056	DEPARTMENT OR EMPLOYEE DETAILS	R		
3413	Department or employee identification	X	an..17	
3412	Department or employee	R	an..35	Contact person or department

Contact >



MESSAGE: MSCONS

SG 0

Function: Start of detail section
Classification: Mandatory (M1).
Comments:
Segments: UNS

UNS Section control
Function: A service segment placed at the start of the detail section to avoid segment collision.
Classification: Mandatory (M1).
Comments:
Example: UNS+D'

Ref.	Name	Cl.	Form.	Description
0081	SECTION IDENTIFICATION	M	a1	Code: D Separates the header and detail section



MESSAGE: MSCONS

SG 5

Function: A segment group containing information about the Data Provider and connected information.
Classification: Mandatory (M99999).
Comments:
Segments: NAD, SG. 6

NAD Name and Address
Function: A segment identifying the Data Provider and if necessary name, address and contact person.
Classification: Mandatory (M1).
Comments:

- Composite element C082 is required if the code «GN» in data element 3035 is used. See the Functional description for a description of the use of data elements C082 1131 and C082 3055.

Example: NAD+XX'

Data
Provider

>

Ref.	Name	Cl.	Form.	Description
3035	PARTY QUALIFIER	M	an..3	Code: GN Processor (Data Provider) XX No heading
C082	PARTY IDENTIFICATION DETAILS	N		
3039	Party id identification	M	an..35	Data Provider
1131	Code list qualifier	D	an..3	Code: 100 Enhanced party identification 160 Party identification NO3 Company registration no. from «Foretaksregisteret» in Norway
3055	Code list responsible agency, coded	R	an..3	Code: 9 EAN (International Article Numbering association) 82 «Enhetsregisteret» in Norway 305 ETSO (European Transmission System Operator) DK Danish Ediel group EDI Other Id. than power plant ELT Eltra EKS Elkraft SLY Finnish Electricity Association SM Nord Pool ASA SVK Svenska Kraftnät
C058	NAME AND ADDRESS	N		
3124	Name and address line	M	an..35	Contact person
3124	Name and address line	X	an..35	
3124	Name and address line	X	an..35	
3124	Name and address line	X	an..35	

Contact
person

>

Name	>	3124	Name and address line	X	an..35	
		C080	PARTY NAME	N		
		3036	Party name	M	an..35	Name
		3036	Party name	X	an..35	
		3036	Party name	X	an..35	
		3036	Party name	X	an..35	
		3045	Party name format, coded	X	an..3	
Address	>	C059	STREET	N		
		3042	Street and number/P.O. Box	M	an..35	Address
		3042	Street and number/P.O. Box	O	an..35	Address
		3042	Street and number/P.O. Box	X	an..35	
Place	>	3164	CITY NAME	N	an..35	Place
		3229	COUNTRY SUB-ENTITY IDENTIFICATION	X	an..9	
Postal code	>	3251	POSTCODE IDENTIFICATION	N	an..9	Postal code
Country	>	3207	COUNTRY, CODED	N	an..3	Code: Use ISO 3166-1 two alpha country code, e.g.: DK Denmark FI Finland DE Germany NL Netherlands NO Norway SE Sweden GB United Kingdom



MESSAGE: MSCONS

SG 6

Function: A group containing Serial Id. and details of line items to be consigned to the delivery points (Serial Id.).
Classification: Mandatory (M99999).
Comments: At least one repetition is required.
Segments: LOC, SG. 7, SG. 9

LOC Place/location identification
Function: A segment identifying Serial Id. (a meter location, an area or a contract) with connected information.
Classification: Mandatory (M1).
Comments:
Example: LOC+90+S-12345::SM'

		Ref.	Name	Cl.	Form.	Description
		3227	PLACE/LOCATION QUALIFIER	M	an..3	Code: 90 Place/location (Serial Id.)
Serial Id.	>	C517	LOCATION IDENTIFICATION	R		
		3225	Place/location identification	R	an..25	Serial Id.
		1131	Code list qualifier	X	an..3	
Code list responsible	>	3055	Code list responsible agency, coded	R	an..3	Code: 9 EAN (International Article Numbering association) 91 Assigned by seller 92 Assigned by buyer 305 ETSO (European Transmission System Operator) DK Danish Ediel group ELT Eltra EKS Elkraft SM Nord Pool ASA SLY Finnish Electricity Association SVK Svenska Kraftnät
		3224	Place/location	X	an..70	
Company 1	>	C519	RELATED LOCATION ONE IDENTIFICATION	O		
		3223	Related place/location one identification	D	an..25	Company 1
		1131	Code list qualifier	X	an..3	
Code list responsible	>	3055	Code list responsible agency, coded	R	an..3	Code: 9 EAN (International Article Numbering association) 305 ETSO (European Transmission System Operator) DK Danish Ediel group ELT Eltra EKS Elkraft SLY Finnish Electricity Association SM Nord Pool ASA SVK Svenska Kraftnät
Area 1	>	3222	Related place/location one	D	an..70	Area 1
Company 2	>	C553	RELATED LOCATION TWO IDENTIFICATION	O		
		3233	Related place/location two identification	D	an..25	Company 2
		1131	Code list qualifier	X	an..3	
Code list responsible	>	3055	Code list responsible agency, coded	R	an..3	Code: 9 EAN (International Article Numbering association) 305 ETSO (European Transmission System Operator) DK Danish Ediel group ELT Eltra EKS Elkraft SLY Finnish Electricity Association SM Nord Pool ASA SVK Svenska Kraftnät
Area 2	>	3232	Related place/location two	D	an..70	Area 2

	5479	RELATION, CODED	X	an..3	
--	------	-----------------	---	-------	--



MESSAGE: MSCONS

SG 7

Function: A Segment group for specifying any references valid for the meter identified in the LOC segment
Classification: Optional (O3).
Comments: Only to be used if bilaterally agreed.
Segments: RFF

RFF References
Function: A segment identifying a transaction reference, Meter unit number or other Serial Id/Time series related to the location (e.g. Metering point) identified in the LOC segment.
Classification: Mandatory (M1).
Comments:
Example: RFF+ACD:S123456'

Ref. To: >
 -Transaction id
 - Meter unit number
 - Serial id/
 Time series

Ref.	Name	Cl.	Form.	Description
C506	REFERENCE	M		
1153	Reference qualifier	M	an..3	Code: ACD Additional reference number (Serial Id.) MG Meter unit number LI Line item reference number (Transaction id)
1154	Reference number	R	an..35	Ref. to Transaction id, Meter unit number or Serial id/Time series
1156	Line number	X	an..6	
4000	Reference version number	X	an..35	



MESSAGE: MSCONS

SG 9

Function: A group of segments defining a product.
Classification: Required (R99).
Comments: At least one repetition is required.
Segments: LIN, MEA, CUX, SG. 10

LIN Line item
Function: A segment identifying the metered product or service for which consumption information is being provided
Classification: Mandatory (M1).
Comments: A list over generic product codes can be found in the Functional description.
Example: LIN+1++8716867000016:::9'

Product

>

Ref.	Name	Cl.	Form.	Description
1082	LINE ITEM NUMBER	R	n..6	Line number (sequence number)
1229	ACTION REQUEST/ NOTIFICATION, CODED	X	an..3	
C212	ITEM NUMBER IDENTIFICATION	R		
7140	Item number	R	an..35	Code: (See separate code lists)
7143	Item number type, coded	X	an..3	
1131	Code list qualifier	X	an..3	
3055	Code list responsible agency, coded	R	an..3	Code: 9 EAN (International Article Numbering association) 305 ETSO (European Transmission System Operator) DK Danish Ediel group ELT Eltra EKS Elkraft SLY Finnish Electricity Association SM Nord Pool ASA SVK Svenska Kraftnät
C829	SUB-LINE INFORMATION	X		
5495	Sub-line indicator, coded	X	an..3	
1082	Line item number	X	n..6	
1222	CONFIGURATION LEVEL	X	n..2	
7083	CONFIGURATION, CODED	X	an..3	

- MEA** Measurements
- Function:** A segment specifying measurements unit.
- Classification:** Dependent (D1).
- Comments:**
- The measure unit qualifiers MWh/h, kWh/h, MVArh/h and kVArh/h are advised not be used in new applications. Please see the functional description for information about the use of measurement unit qualifiers for power and energy.
 - Shall be used if anything other than «MWh/h» is used as measurement unit.
 - This segment is an addition to the standard UN/EDIFACT message.
 - See chapter 5 for a description of the use of this segment.
- Example:** MEA+AAZ++MWH'

Measure unit >

Ref.	Name	Cl.	Form.	Description
6311	MEASUREMENT APPLICATION QUALIFIER	M	an..3	Code: AAZ Handling unit measurement
C502	MEASUREMENT DETAILS	X		
6313	Measurement dimension, coded	X	an..3	
6321	Measurement significance, coded	X	an..3	
6155	Measurement attribute, coded	X	an..3	
6154	Measurement attribute	X	an..70	
C174	VALUE/RANGE	R		
6411	Measure unit qualifier	M	an..3	Code: <i>Power</i> KVR kvar (Kilovar) KWT kW (Kilowatt) MAW MW (Megawatt) MVA MVA (Megavolt-ampere) Z03 MVA (MegaVolt-Ampere reactive power)

					<p>Code cont.:</p> <p><i>Energy</i></p> <p>3B MJ (Megajoule)</p> <p>GV GJ (Gigajoule)</p> <p>GWH GWh (Gigawatt-hour)</p> <p>KWH kWh (Kilowatt-hour)</p> <p>K3 kVArh (KiloVolt-Ampere reactive hour) - (also to be used for kVArh/h)</p> <p>MWH MWh (Megawatt-hour)</p> <p>Z01 MWh/h (Megawatt-hour per hour)</p> <p>Z02 kWh/h (Kilowatt-hour per hour)</p> <p>Z04 MVAh/h (MegaVolt-Ampere reactive hour per hour) – (also to be used for MVAh)</p> <p>Z05 MW/Hz (Frequency adjustment)</p> <p>Z09 MJ/s (Megajoule/second)</p> <p><i>Miscellaneous</i></p> <p>A97 hPa (Hectopascal), i.e. atmospheric pressure</p> <p>CEL Degrees Celsius</p> <p>D54 Global solar radiation</p> <p>HTZ Hertz</p> <p>LTR Litre</p> <p>MMT Millimetre (i. e. precipitation)</p> <p>MQH m³/h (Cubic metre per hour), flow rate, e.g. used for hot water)</p> <p>MQS Cubic metre/second, water</p> <p>MTQ Cubic metre</p> <p>MTR Metre</p> <p>MTS Metre per second (i. e. Wind force)</p> <p>P1 Percent</p> <p>SEC Seconds</p> <p>TNE Tonne (metric ton)</p> <p>Z07 8-parts (i. e. Cloud cover)</p> <p>Z08 Wind direction (0-360)</p> <p>Z10 Only price (see CUX)</p> <p>Z14 Danish Tariff code</p> <p>Z15 kWh/m³</p>
	6314	Measurement value	X	n..18	
	6162	Range minimum	X	n..18	
	6152	Range maximum	X	n..18	
	6432	Significant digits	X	n..2	
	7383	SURFACE/LAYER INDICATOR, CODED	X	an..3	

CUX Currencies
Function: To specify currencies used in the time series.
Classification: Depending (D1).
Comments:

- Only to be used if the time series describes monetary amounts.
- This segment is an addition to the standard UN/EDIFACT message.
- See chapter 5 for a description on the use of this segment.

Example: CUX+2:SEK'

Currency >

Ref.	Name	Cl.	Form.	Description
C504	CURRENCY DETAILS	R		
6347	Currency details qualifier	M	an..3	Currency details qualifier Code: 2 Reference currency (The currency applicable to amounts stated. It may have to be converted).
6345	Currency, coded	R	an..3	ISO currency code Code: DKK Denmark - Krone NOK Norwegian - Krone RUR Russia - Ruble SEK Sweden – Krona EUR Euro
6343	Currency qualifier	X	an..3	
6348	Currency rate base	X	n..4	
C504	CURRENCY DETAILS	X		
6347	Currency details qualifier	X	an..3	
6345	Currency, coded	X	an..3	
6343	Currency qualifier	X	an..3	
6348	Currency rate base	X	n..4	
5402	RATE OF EXCHANGE	X	n..12	
6341	CURRENCY MARKET EXCHANGE, CODED	X	an..3	



MESSAGE: MSCONS

SG 10

Function: A group of segments providing details of the meter read, consumption, correction quantities, and any associated dates.

Classification: Mandatory (M9999).

Comments:

Segments: QTY, DTM

QTY Quantity

Function: A segment identifying the consumption details, e. g. opening meter reading, consumption, adjustments (corrections).

Classification: Mandatory (M1).

Comments:

- MWh/h is default measurement unit if no other unit is specified in the MEA-segment in segment group 9.
- The codes 31 or 67 are used for estimated annual (or period) volumes for an end-user. A DTM segment defining the period for the “estimated period volume” must follow 67. SG 10 may be repeated several times with code 67.
- The codes 137, 138, 139 and 140 are used for meter stands.
- The code 143 is used for energy deviation (the difference between actual and estimated values).
- If the code in C186 6063 is «Z03, No value» - the value in C186 6060 should be 0 (zero).

Example: QTY+136:90'

	Ref.	Name	Cl.	Form.	Description
Status code	C186	QUANTITY DETAILS	M		
	6063	Quantity qualifier	M	an..3	Code: 31 Estimated annual volume 67 Estimated reading quantity (Estimated period volume). 94 Substitutional quantity 99 Estimated quantity 136 Period quantity, reached 137 Cumulative quantity, preceding period, estimated 138 Cumulative quantity, actual estimated 139 Cumulative quantity, preceding period, measured 140 Cumulative quantity, actual measured 143 Quantity, remaining (Energy deviation) Z01 Manually corrected quantity Z02 Uncertain quantity Z03 No value Z04 Delta value
Quantity	6060	Quantity	M	n..15	Quantity
	6411	Measure unit qualifier	X	an..3	

Time period >

DTM Date/time/period
Function: A segment indicating the date/time/period details relating to the quantity in the QTY segment. This segment may indicate date/time ranges, e. g. start and end dates for a delivery pattern, or delivery window.
Classification: Dependent (D2)
Comments:

- This segment is not required when using the code "31 Estimated annual volume" in the QTY segment.
- Time zone is defined in DTM in SG 0. See the Functional description for a description on the use of the format qualifier.
- Code 203 in data element C507 2379 is used for reporting instant values.
- Code 367 and 368 in data element C507 2005 are used for meter stands together with the code 203 in data element C507 2379.
- Code 158 and 159 in data element C507 2005 are used together with the code 108 in data element C507 2379 for reporting of period for “estimated period volume” (see the QTY segment). Both start and end date are required (two repetitions).

Example: DTM+324:199905080100199905090000:Z13'

Ref.	Name	Cl.	Form.	Description
C507 2005	DATE/TIME/PERIOD Date/time/period qualifier	M M	an..3	Code: 158 Horizon start date 159 Horizon end date 324 Processing date/period 367 Previous meter reading date 368 Latest meter reading date
2380 2379	Date/time/period Date/time/period format qualifier	R R	an..35 an..3	Time Code: 108 WW 203 CCYYMMDDHHmm Z13 CCYYMMDDHHmm- CCYYMMDDHHmm (Without hyphen)



MESSAGE: MSCONS

SG 11

Function: A group of segments providing characteristic details related to the details for the currently identified line item.
Classification: Optional (O5).
Comments:
Segments: CCI, MEA

CCI Characteristic/class id
Function: A segment used to describe the characteristics of a meter.
Classification: Mandatory (M1).
Comments:
Example: CCI+++Z01'

Ref.	Name	Cl.	Form.	Description
7059	PROPERTY CLASS, CODED	X	an..3	
C502	MEASUREMENT DETAILS	X		
6313	Measurement dimension, coded	X	an..3	
6321	Measurement significance, coded	X	an..3	
6155	Measurement attribute identification	X	an..17	
6154	Measurement attribute	X	an..70	
C240	PRODUCT CHARACTERISTIC	R		
7037	Characteristic identification	M	an..17	Code: Z01 Constant Z02 Number of digits Z03 Meter time frame Z04 Reason for meter reading Z06 Metered data collector
1131	Code list qualifier	X	an..3	
3055	Code list responsible agency, coded	X	an..3	
7036	Characteristic	X	an..35	
7036	Characteristic	X	an..35	
4051	CHARACTERISTIC RELEVANCE, CODED	X	an..3	

MEA Measurements
Function: A segment enabling the indication of measurements related to the characteristics identified in the preceding CCI segment.
Classification: Required (R1).
Comments:
Example: MEA+SV++ZZ:8'

Characteristic value >

Ref.	Name	Cl.	Form.	Description
6311	MEASUREMENT APPLICATION QUALIFIER	M	an..3	Code: SV Specification value
C502	MEASUREMENT DETAILS	X		
6313	Measurement dimension, coded	X	an..3	
6321	Measurement significance, coded	X	an..3	
6155	Measurement attribute, coded	X	an..3	
6154	Measurement attribute	X	an..70	
C174	VALUE/RANGE	R		
6411	Measure unit qualifier	M	an..3	Code: ZZ mutually defined <i>Constant:</i> The constant of the meter <i>Number of digits:</i> The number of digits (integer part) <i>Meter time frame:</i> Use bilaterally defined codes <i>Reason for meter reading:</i> 1 Periodical 2 Change of supplier 3 Control reading 4 Change of meter (last reading old meter) 5 Change of meter (first reading new meter) 6 Correction of meter reading 7 Change of balance responsible 8 Move (Customer move) 9 Update of master data, metering point, requiring meter reading <i>Metered data collector</i> 1 Grid company (incl. automatic reading systems) 2 Customer (self reading cards, web etc)
6314	Measurement value	R	n..18	
6162	Range minimum	X	n..18	
6152	Range maximum	X	n..18	
6432	Significant digits	X	n..2	
7383	SURFACE/LAYER INDICATOR, CODED	X	an..3	



MESSAGE: MSCONS

SG 0

Function: Summary section
Classification: Mandatory (M1).
Comments:
Segments: CNT, UNT

CNT Control total
Function: A segment by which control totals may be provided by the sender for checking by the receiver.
Classification: Required (R1).
Comments: A net sum for the quantity in the QTY segment in SG 10 shall be sent. Positive quantities are added while negative quantities are subtracted.
Example: CNT+1:224'

Total quantity

>

Ref.	Name	Cl.	Form.	Description
C270	CONTROL	M		
6069	Control qualifier	M	an..3	Code: 1 Algebraic total of the quantity values
6066	Control value	M	n..18	Net sum for the quantity
6411	Measure unit qualifier	X	an..3	

UNT Message trailer
Function: A service segment ending a message, giving the total number of segments in the message and the control reference number of the message.
Classification: Mandatory (M1).
Comments:
Example: UNT+62+1'

Ref.	Name	Cl.	Form.	Description
0074	NUMBER OF SEGMENTS IN THE MESSAGE	M	n..6	Number of segments in the message, including UNH and UNT.
0062	MESSAGE REFERENCE NUMBER	M	an..14	Control reference number. Equal to 0062 in UNH

Appendix A EXAMPLES OF EDIFACT MESSAGES

A.1 Danish example

UNA:+.? '
UNB+UNOC:3+5790000701278:14+5790000432752:14+030827:1450+334357++DK-TIS-MET+++DK'
UNH+1+MSCONS:D:96A:ZZ:E2DK202+DK-BT-008-002'
BGM+7+S0000149852+9+AB'
DTM+137:200308271350:203'
DTM+163:200308242300:203'
DTM+164:200308252300:203'
DTM+ZZZ:1:805'
NAD+DO+5790000432752::9'
NAD+FR+5790000701278::9'
CTA+MS+:Jesper Jensen Phone'
UNS+D'
NAD+XX'
LOC+90+639917::ELT+::DK:754+7080000729821::9'
LIN+1++1004:::ELT'
MEA+AAZ++KWH'
QTY+136:-103'
DTM+324:200308242300200308242315:Z13'
QTY+136:-101'
DTM+324:200308242315200308242330:Z13'
QTY+136:-99'
DTM+324:200308242330200308242345:Z13'
QTY+136:-104'
DTM+324:200308242345200308242400:Z13'
QTY+136:-110'
DTM+324:200308250000200308250015:Z13'
....

QTY+136:-113'
DTM+324:200308252230200308252245:Z13'
QTY+136:-113'
DTM+324:200308252245200308252300:Z13'
NAD+XX'
LOC+90+630001::ELT+::DK:877+::DK:865'
LIN+1++1001:::ELT'
MEA+AAZ++MWH'
QTY+136:2.271'
DTM+324:200308242300200308242315:Z13'
QTY+136:2.333'
DTM+324:200308242315200308242330:Z13'
QTY+136:2.369'
DTM+324:200308242330200308242345:Z13'
QTY+136:2.619'
DTM+324:200308242345200308242400:Z13'
QTY+136:2.753'
DTM+324:200308250000200308250015:Z13'
....

QTY+136:2.814'
DTM+324:200308252230200308252245:Z13'
QTY+136:2.819'
DTM+324:200308252245200308252300:Z13'
NAD+XX'
LOC+90+630003::ELT+::DK:359'
LIN+1++1002:::ELT'

MEA+AAZ++MWH'
QTY+136:0.002'
DTM+324:200308242300200308242315:Z13'
QTY+136:-0.01'
DTM+324:200308242315200308242330:Z13'
QTY+136:-0.01'
DTM+324:200308242330200308242345:Z13'
QTY+136:0'
DTM+324:200308242345200308242400:Z13'
QTY+136:-0.01'
DTM+324:200308250000200308250015:Z13'
....

QTY+136:0'
DTM+324:200308252230200308252245:Z13'
QTY+136:-0.006'
DTM+324:200308252245200308252300:Z13'
NAD+XX'
LOC+90+853001::ELT'
LIN+1++1002:::ELT'
MEA+AAZ++KWH'
QTY+136:34'
DTM+324:200308242300200308242315:Z13'
QTY+136:147'
DTM+324:200308242315200308242330:Z13'
QTY+136:162'
DTM+324:200308242330200308242345:Z13'
QTY+136:161'
DTM+324:200308242345200308242400:Z13'
QTY+136:161'
DTM+324:200308250000200308250015:Z13'
....

QTY+136:0'
DTM+324:200308262230200308262245:Z13'
QTY+136:0'
DTM+324:200308262245200308262300:Z13'
CNT+1:18458'
UNT+399+1'
UNZ+1+MX0000001685'

A.2 Danish example, MSCONS from a grid-company to the system operator

UNA:+.?'
UNB+UNOC:3+5790000610976:14+5791111333334:14+031023:1233+A0310231233510++DK-TIS-SHA+++DK'
UNH+1+MSCONS:D:96A:ZZ:E2DK02+DK-BT-009-002'
BGM+7+C03102410+9+AB'
DTM+137:200310231031:203'
DTM+163:200311010000:203'
DTM+164:200312010000:203'
DTM+ZZZ:1:805'
NAD+FR+5790000610976::9'
NAD+DO+5791111333334::9'
UNS+D'
NAD+XX'
LOC+90+776425::ELT+::DK:777+5790000701414::9'
LIN+1++9001:::DK'
MEA+AAZ++KWH'
QTY+136:20000'
DTM+324:200311010000200312010000:Z13'
NAD+XX'
LOC+90+776429::ELT+::DK:777+5790000701933::9'
LIN+1++9001:::DK'
MEA+AAZ++KWH'
QTY+136:10000'
DTM+324:200311010000200312010000:Z13'
NAD+XX'
LOC+90+776426::ELT+::DK:777+5790000705672::9'
LIN+1++9001:::DK'
MEA+AAZ++KWH'
QTY+136:15000'
DTM+324:200311010000200312010000:Z13'
NAD+XX'
LOC+90+750430::ELT+::DK:777'
LIN+1++9002:::DK'
MEA+AAZ++KWH'
QTY+136:45000'
DTM+324:200311010000200312010000:Z13'
CNT+1:90000'
UNT+35+1'
UNZ+1+A0310231233510'

A.3 Swedish example

UNA:+.? '
UNB+UNOB:2+12345:ZZ+10001:ZZ:BAS+990503:1033+AP197303103332'
UNH+1+MSCONS:D:96A:ZZ:EDIEL2'
BGM+7+AP1999050310333123+9+NA'
DTM+137:199905031033:203'
DTM+163:199905020000:203'
DTM+164:199905030000:203'
DTM+ZZZ:1:805'
NAD+FR+12345:160:SVK'
CTA+MS+:Mr. Power'
NAD+DO+10001:160:SVK'
UNS+D'
NAD+XX'
LOC+90+12345LOK000Q55000::SVK+55000::SVK:LOK000'
LIN+1++1008:::SVK'
MEA+AAZ++Z01'
QTY+136:-10.331'
DTM+324:199905020000199905020100:Z13'
QTY+136:-9.465'
DTM+324:199905020100199905020200:Z13'
QTY+136:-8.878'
DTM+324:199905020200199905020300:Z13'
QTY+136:-8.808'
DTM+324:199905020300199905020400:Z13'
QTY+136:-8.848'
DTM+324:199905020400199905020500:Z13'
QTY+136:-9.288'
DTM+324:199905020500199905020600:Z13'
QTY+136:-9.706'
DTM+324:199905020600199905020700:Z13'
QTY+136:-9.564'
DTM+324:199905020700199905020800:Z13'
QTY+136:-11.154'
DTM+324:199905020800199905020900:Z13'
QTY+136:-12.956'
DTM+324:199905020900199905021000:Z13'
QTY+136:-14.566'
DTM+324:199905021000199905021100:Z13'
QTY+136:-15.178'
DTM+324:199905021100199905021200:Z13'
CNT+1:-128.742'
UNT+64+1'
UNZ+1+AP197303103332'