



STS Association

STS 531-6-1-07

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April 2023

**Compliance Test Specification - Entity Type F –
MeterApplicationProcess
for TCT = 01 and TCT = 02, Using EA=07**

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Revision History

Edition	Clause	Date	Change details from previous Edition
1.1	General	22 Feb 2015	Updated Edition number from 1 to 1.1 to match document set
1.2	General	May 2015	Edition number changed from 1.1 to 1.2 to match document set
1.3	CTSF72	July 2015	Updated token in CTSF72 Step 1 to a new TID value since this resulted in a Used error from a token in a previous test. Removed Annexures B and C since they are not used. Added Edition column to this table.
1.3	4.1.2	July 2015	Added key values for tests
1.4	General 4.1.60 CTSF55	Oct 2015	Edition number changed from 1.3 to 1.4 to match document set Changed DCTK to DITK in the heading Added note for meters complying with STS202-3
1.5	CTSF77	April 2016	Changed note to add (currency and kWh) Changed token to Clear All Credit token to cater for both meter types Changed STS logo to latest Changed Page header to reflect correct document number
1.6	General	June 2016	Highlighted UUT number in each test set. CTSF42 - made this test optional as per ED2 of IEC62055-41
1.7	General	Nov 2016	Only Edition number changed from 1.6 to 1.7 to match the document suite
1.8			This edition not published
1.8.1	This table Various CTSF55 CTSF70, Step 3	Nov 2017	Changed 'copmlpying' to 'complying' in Ed1.4 change details. Changed 'maximum power load' to 'maximum power limit' in various places. Removed "currency based" for the statement regarding STS202-3 Renumbered test steps to start from 0
	Annexure		Removed reference to token lockout since this only applies to VTC, and meter leaving the factory in DITK since this is the manufacture's responsibility only and cannot be tested
	4.1.7		Removed white space between paragraph and test table
	CTSF56 Step 1		Corrected key type from 3 to 0
	CTSF74		Added note for TID stack depth of 62 and 63
1.8.2	CTSF62 Step 1		Changed time of token 14:15:00 to 14:16:00 due to conflict with CTSF66 token date/time
1.9	This table	Aug 2017	Changed 'copmlpying' to 'complying' in change details.

	Various CTSF55		Changed 'maximum power load' to 'maximum power limit' in various places. Removed "currency based" for the statement regarding STS202-3
	Annexure		Removed reference to token lockout since this only applies to VTC, and meter leaving the factory in DITK since this is the manufacture's responsibility only and cannot be tested
	CTSF02		Changed unit resolution to 0.1 credit units for non currency payment meters, and 1 credit unit for currency based payment meters. (Ed3)
	CTSF59		Added tests for keychange triplet.(Ed3)
	CTSF03, 16, 17, 18, 36, 37, 55, 69, 70, 71		Added additional Test/Display tokens in all related tests. (Ed3)
	CTSF04, 19, 39, 72		Added token extension token tests as defined in STS202-5
	CTSF19, 39, 72		Changed Class 2 Subclass 10 tests for reserved tokens to Class 2 Subclass 11 since Subclass 10 is no longer reserved. (STS202-5)
1.9.1	CTSF19, CTSF39, CTSF72	March 2019	Added note to indicate that Class 2 subclass 11 may be accepted if proprietary tokens are implemented, but shall not be tested. Updated Annexure A1.
	4.1.2		Changed submission labels
	4.1.4		Added note to 4.1.4 regarding token combinations
	technical		Removed table in 1.1
	Test/Display Test 0 responses in various tests		Remove references to Table 1 for the tests that are no longer optional.
	general		Added foreword, updated Annexures
1.9.2	General	July 2019	Only Edition number changed to match the document suite
1.9.3	Annexure A1	Jan 2020	Updated Annexure A1 for Class2 Subclass 10
1.9.4	CTSF74	Jan 2021	Swapped tokens 1 and 2 in each of the 60 token tests to check acceptance of out of date sequence tokens
	Foreword		Added note on voting
	CTSF16, Steps 5,6 CTSF35, Steps 5,6 CTSF69, Steps 5,6		Added Step 6 with token TID smaller than Step 5 to ensure that the TID is not filled with the first token the meter receives after a Rollover event
1.9.5	CTSF61 Step 4	Apr 2022	Change power limit token amount to 1kW to match the 20 digit token
	CTSF44		Remove reference to kwh in Test3
	CTSF56 Step1		Corrected KT to 0
	CTSF16 Step 3		Corrected keychange token

1.9.6	CTSF21, CTSF56, CTSF75	April 2023	Updated these tests to reject the keychange on the first token entered.
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STANDARD TRANSFER SPECIFICATION ASSOCIATION

STANDARD TRANSFER SPECIFICATION –

Compliance Test Specification – Entity Type F – MeterApplicationProcess
for TCT = 01 and TCT = 02, Using EA=07

FOREWORD

- 1) The Standard Transfer Specification Association (STSA) is a worldwide organization for standardization comprising all members of STSA. The object of STSA is to develop, maintain and promote international use of the Standard Transfer Specification (STS). To this end and in addition to other activities, STSA publishes Standards, Technical Specifications, Technical Reports, Codes of Practice and Guides (hereafter referred to as “STSA Publication(s)”). Their preparation is entrusted to technical working groups; any STSA member interested in the subject dealt with may participate in this preparatory work. STSA collaborates closely with the International Electrotechnical Commission (IEC) in accordance with conditions determined by agreement between the two organizations. As such STSA performs the role of Registration Authority of IEC 62055-41, IEC 62055-51 and IEC 62055-52 on behalf of IEC.
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Standard Transfer Specification STS531-6-1-07 has been prepared by working group 8.

The text of this standard is based on the following documents:

FDS	Report on voting
STS531-6-1-07/CD	see note1

Note1: due to the large number of documents in the test set, member voting is not performed prior to publication. However, corrections will be made to the document set if errors are reported.

This publication has been drafted in accordance with STSA Directive STS 2100-1 with the exception of Note1

1 Scope

1.1 General

This document provides the compliance criteria and test descriptions for prepayment meters designed to accept tokens that comply with the STS and POS systems designed to produce STS-compliant tokens.

2 Normative references

2.1 General

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 62051 - *ELECTRICITY METERING – Glossary of terms*

IEC 62055-41 - *ELECTRICITY METERING – PAYMENT SYSTEMS – Part 41: Standard Transfer Specification – Application layer protocol for one-way token carrier systems*

STS531-0 *Compliance Test Specification – Quality plan*

3 Terms and definitions

3.1 Definitions

For the purposes of this test specification, the definitions given in the normative references identified in paragraph 2 apply.

3.2 Terms

For the purposes of this test specification, the terms given in the normative references identified in paragraph 2 apply.

4 Test requirements and specifications

4.1 General

Each test comprises a number of steps with associated recordings and expected results. Any deviation from these shall be interpreted as non-compliance and a failure recorded against that step.

The tests in this document indirectly test the following,

- general token acceptance;
- the PM's display indicators and markings;

in addition to the specific test in question.

4.1.1 Equipment to be submitted

The following equipment is required for certification:

- 3 meters loaded with following DITK₁: 1111111111111111₁₆. The meters' entire TID stack shall be preloaded with the TID 5A45A1₁₆; this TID corresponds to the token issue date and time of 2004-04-01 09:05. The meters shall have an available credit balance of zero units. These meters shall be referred to as "Entity Type F - UUT01-07, UUT02-07, and UUT03-07".
- If the payment meter stores its manufacturing date, the meters submitted must have this date set to 1st January 1993 00h00.
- The meters shall either support TCT=01 or TCT=02. For meters that support more than one TCT type, a separate set of 3 meters must be supplied for each TCT type supported.
- The meters must be submitted in an un-tampered state

The following keys are used for these tests:

DITK₁ = 1111111111111111
DCTK₀ = 4545454545454545
DCTK₁ = ABABABABABABABAB
DCTK₂ = 3737373737373737
DCTK₃ = BBBBBBBBBBBBBBBBBB
DDTK₀ = 1234567890ABCDEF
DDTK₁ = FEDCBA0987654321
DDTK₂ = F1F1F1F1F1F1F1F1
DUTK₀ = 4545454545454545
DUTK₁ = ABABABABABABABAB
DUTK₂ = 3737373737373737

4.1.2 Required information to be submitted

Annexure A and A.1 must be completed by the manufacturer.

4.1.3 Test equipment required

The following test equipment is required for electricity meters:

- A 1.2kW load.

Note: This set of tests covers utility types – Electricity, Water, Gas, Connection Time, and Currency, as well as meters with 4 digit manufacturer codes. Do only the tests required for the submitted utility type. Meters supporting multiple utility types must be tested separately for each utility type.

Note: For tests CTSF01 to CTSF22, use UUT01.

All token acceptance and rejection will be indicated as described by the manufacturer in Table 1.

Note: during a keychange operation, some meters may reject a keychange token immediately, while others may only reject a token after the token pair has been entered. Both are acceptable. The manufacturer should specify which process his meter follows in Annexure A1.

Note: The payment meter shall reject tokens from all unsupported utility types. The payment meter shall also reject tokens for unsupported TCT types.

Note: The tests in this document do not test all combinations of tokens. It is the manufacturer's responsibility to ensure that all the required tokens for the entity type, as specified in IEC62055-41, are supported.

4.1.4 CTSF01 – DITK to DITK key change

This test currently not done due to IEC62055-41 (6.5.2.5) handling of KRN with a DITK.

4.1.5 CTSF02 – DITK coded accepting credit token

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of a TransferCredit token while loaded with a DITK.

Step	Instruction	Expected Result
1	<p>Power up UUT01 Insert the following token encoded using DITK₁</p> <p>electricity meters: 0.1 kWh credit token: 5862 6151 3284 9471 2445</p> <p>water meters: 0.1 kl credit token: 5503 0687 6725 3601 7337</p> <p>gas meters: 0.1 m³ credit token: 3380 1326 9168 2004 4959</p> <p>time meters: 0.1 min credit token: 5837 6412 0036 7183 2364</p> <p>For currency based meters insert the following:</p> <p>electricity currency meter, 1 units electricity currency token. 1458 4224 9326 3208 2674</p> <p>water currency meter, 1 units water currency token 2944 9468 1345 2457 4076</p> <p>gas currency meter, 1 units gas currency token 3267 6063 3565 4227 8445</p> <p>time currency meter, 1 units time currency token 0386 8964 9642 0453 1215</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be incremented from 0 to the specified value of the token. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

4.1.6 CTSF03 – DITK coded accepting non-PM-specific management token

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of non-PM-specific management tokens while loaded with a DITK. This test uses the InitiateMeterTest/Display token to verify the processing of non-PM-specific management tokens.

Step	Instruction	Expected Result
1	<p>Insert the following token.</p> <p>For 11 digit DRN meters:</p> <p>5649 3153 7254 5031 3471</p> <p>For 13 digit DRN meters:</p> <p>0230 5843 0050 5295 1967</p> <p>Test token – Test number 0.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The PM or customer interface terminal should then perform the following tests:</p> <ol style="list-style-type: none"> 1. Test the load switch. If the manufacturers response in Table1 is that the load switch test is not supported, then the load switch should not be tested and this step may be skipped. 2. Test the meter information display services. 3. Display the cumulative consumption register totals. 4. Display the KRN. 5. Display the TI. 6. If the response in Table 1 indicates that test number 6 token is supported, test the token reader device. 7. If the response in Table 1 indicates that test number 7 token is supported, display the maximum power limit. 8. If the response in Table 1 indicates that test number 8 token is supported, display the tamper status. 9. If the response in Table 1 indicates that test number 9 token is supported, display the power consumption. 10. Display the software version. 11. If the response in Table 1 indicates that test number 11 token is supported, display the phase power unbalance limit. 12. Reserved 13. Reserved 14. Display the EA value 15. Display the number of keychange tokens supported 16. If the response in Table 1 indicates that test number 16 token is supported, display the SGC value 17. Display the KEN value 18. Display the DRN <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

4.1.7 CTSF04 – DITK coded accepting PM-specific management token

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of PM-specific management tokens while loaded with a DITK. This test uses the ClearCredit token to verify the processing of PM-specific management tokens.

Step	Instruction	Expected Result
1	<p>Insert the following clear credit token encoded using the DITK₁.</p> <p>for electricity meters</p> <p>3329 6764 5909 9676 4361</p> <p>for water meters</p> <p>3022 9777 1735 8897 7524</p> <p>for gas meters</p> <p>2414 2497 3937 1009 8911</p> <p>for time meters</p> <p>1264 4496 5689 9226 7466</p> <p>For currency based meters insert the following:</p> <p>for electricity currency</p> <p>5644 9238 5278 0407 1357</p> <p>for water currency</p> <p>3248 6877 1212 7021 8250</p> <p>for gas currency</p> <p>2295 1270 4275 5670 2522</p> <p>for time currency</p> <p>4817 4195 2806 1842 2590</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 0 credit units. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
2	<p>Insert the following token</p> <p>5245 2189 3475 4374 4647</p> <p>DITK₁ coded Class2 SubClass10 token. (Index = 63, FlagIndex = 0, FlagValue = 0)</p>	<p>If the manufacturer has stated in Table 1 that the payment meter supports Class2 Subclass10 tokens as specified in STS202-5 for Flag setting, then the PM or customer interface terminal shall accept the token.</p> <p>Otherwise, the PM or customer interface shall reject the token, and Steps 3 to 5 may be omitted.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
3	<p>Read the flag 0</p> <p>0344 0750 1154 4527 9822</p>	<p>The PM shall indicate a value of 0 for the flag value.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

Step	Instruction	Expected Result
4	Insert the following token 6143 9704 8165 4565 2105 DITK ₁ coded Class2 SubClass10 token. (Index = 63, FlagIndex = 0, FlagValue = 1)	The PM or customer interface terminal shall accept the token. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
5	Read the flag 0 0344 0750 1154 4527 9822	The PM shall indicate a value of 1 for the flag value. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
6	Insert the following token 7247 9162 7832 7079 3489 DITK ₁ coded Class2 SubClass10 token. (Index = 0, ControlValue = 0)	If the manufacturer has stated in Table 1 that the payment meter supports Class2 Subclass10 tokens for ControlValue setting as specified in STS202-5, then the PM or customer interface terminal shall accept the token. Otherwise, the PM or customer interface shall reject the token, and Steps 7 to 9 may be omitted. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
7	Read the control value 0230 5843 0093 4791 4912	The PM shall indicate a value of 0 for the control value. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
8	Insert the following token 2049 3969 1124 0683 1635 DITK ₁ coded Class2 SubClass10 token. (Index = 0, ControlValue = 0123)	The PM or customer interface terminal shall accept the token. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
9	Read the control value 0230 5843 0093 4791 4912	The PM shall indicate a value of 0123 for the control value. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

4.1.8 CTSF05 – DITK to DCTK key change

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the DITK to DCTK key change.

Step	Instruction	Expected Result
1	Insert the following token 4472 7095 2838 7167 2106 First token of Set PM Key token pair. DITK ₁ to DCTK ₀ key-change token. (KENHO = F, KRN = 1, RO = 0, Res = 0, KT = 3)	The PM or customer interface terminal shall indicate the acceptance of the first "Set PM key".

Step	Instruction	Expected Result
2	Insert the following token 4105 9084 7468 1430 1454 Second token of Set PM Key token pair. DITK ₁ to DCTK ₀ key-change token. (KENLO = F, TI = 01)	The PM or customer interface terminal shall indicate the acceptance of the second "Set PM key" token if the PM supports TCT=01, otherwise the PM shall reject the token.. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

Note: Tests CTSF06 to CTSF22 are only to be performed for PM's supporting TCT=01.

4.1.9 CTSF06 – DCTK to DCTK key change

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the DCTK to DCTK key change, with two invalid tokens entered.

Step	Instruction	Expected Result
1	Insert the following token 0060 2246 2309 5457 4066 First token of Set PM Key token pair. DCTK ₀ to key-change token. (KENHO = F, KRN = 1, RO = 0, Res = 0, KT = 3)	The PM or customer interface terminal shall indicate the acceptance of the first "Set PM key" token.
2	Insert the following (invalid) token 0541 7192 0068 0370 8424	The PM or customer interface terminal shall reject the token. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
3	Insert the following (invalid) token 0646 7192 0068 0380 8444	The PM or customer interface terminal shall reject the token. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
4	Insert the following token 2094 9545 2183 3587 0169 Second token of Set PM Key token pair. DCTK ₀ to DCTK ₁ key-change token. (KENLO = F, TI = 01)	The PM or customer interface terminal shall indicate the acceptance of the second "Set PM key" token. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

4.1.10 CTSF07 – DCTK coded accepting credit token

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of a TransferCredit tokens while loaded with a DCTK.

For Electricity meters – do steps 1 to 6.

Step	Instruction	Expected Result
1	<p>Insert the following token</p> <p>1023 4928 5950 1961 0279</p> <p>5 kilowatt-hour credit token encoded using DCTK₁.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 5 kilowatt-hours.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
2	<p>Insert the following token.</p> <p>5363 1666 1815 1382 6308</p> <p>1638.4 kilowatt-hour credit token encoded using DCTK₁.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 1643.4 kilowatt-hours.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
3	<p>Insert the following token.</p> <p>4578 9434 3801 1840 2852</p> <p>18022.4 kilowatt-hour credit token encoded using DCTK₁.</p>	<p>If 19665.8 kilowatt-hours is greater than the maximum amount of available credit that the meter can store as specified in Table 1 then the meter shall reject the token.</p> <p>Otherwise, the PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 19665.8 kilowatt-hours.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
4	<p>Insert the following token.</p> <p>4320 1095 0181 4347 0213</p> <p>181862.4 kilowatt-hour credit token encoded using DCTK₁.</p>	<p>If 201528.2 kilowatt-hours is greater than the maximum amount of available credit that the meter can store as specified in Table 1 then the meter shall reject the token.</p> <p>Otherwise, the meter shall indicate the acceptance of the token as described by the manufacturer in Table 1. The available credit in the meter shall be 201528.2 kilowatt-hours.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
5	<p>Insert the following token.</p> <p>1023 4928 5950 1961 0279</p> <p>5 kilowatt-hour credit token encoded using DCTK₁.</p>	<p>Record the available credit in the PM or customer interface terminal to ensure that this step does not alter the available credit in any way. The PM or customer interface terminal shall reject the token as "Used". The available credit in the meter shall not change.</p>

Step	Instruction	Expected Result
6	Insert the following token. 5363 1666 1815 1382 6308 1638.4 kilowatt-hour credit token encoded using DCTK ₁	Record the available credit in the PM or customer interface terminal to ensure that this step does not alter the available credit in any way. The PM or customer interface terminal shall reject the token as "Used". The available credit in the meter shall not change.

For water meters – do steps 7 to 12.

Step	Instruction	Expected Result
7	<p>Insert the following token</p> <p>6734 3006 5844 4191 4557</p> <p>5 kl credit token encoded using DCTK₁.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 5 kl.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
8	<p>Insert the following token.</p> <p>6843 9260 2185 5059 5843</p> <p>1638.4 kl credit token encoded using DCTK₁.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 1643.4 kl.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
9	<p>Insert the following token.</p> <p>5739 5841 4737 5111 2352</p> <p>18022.4 kl credit token encoded using DCTK₁.</p>	<p>If 19665.8 kl is greater than the maximum amount of available credit that the meter can store as specified in Table 1 then the meter shall reject the token.</p> <p>Otherwise, the PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 19665.8 kl.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
10	<p>Insert the following token.</p> <p>0976 4207 3911 0638 7406</p> <p>181862.4 kl credit token encoded using DCTK₁.</p>	<p>If 201528.2 kl is greater than the maximum amount of available credit that the meter can store as specified in Table 1 then the meter shall reject the token.</p> <p>Otherwise, the meter shall indicate the acceptance of the token as described by the manufacturer in Table 1. The available credit in the meter shall be 201528.2 kl.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
11	<p>Insert the following token.</p> <p>6734 3006 5844 4191 4557</p> <p>5 kl credit token encoded using DCTK₁.</p>	<p>Record the available credit in the PM or customer interface terminal to ensure that this step does not alter the available credit in any way. The PM or customer interface terminal shall reject the token as "Used". The available credit in the meter shall not change.</p>
12	<p>Insert the following token.</p> <p>6843 9260 2185 5059 5843</p> <p>1638.4 kl credit token encoded using DCTK₁.</p>	<p>Record the available credit in the PM or customer interface terminal to ensure that this step does not alter the available credit in any way. The PM or customer interface terminal shall reject the token as "Used". The available credit in the meter shall not change.</p>

For gas meters – do steps 13 to 18.

Step	Instruction	Expected Result
13	<p>Insert the following token</p> <p>1926 3744 5978 4038 1376</p> <p>5 m³ credit token encoded using DCTK₁.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 5 m³.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
14	<p>Insert the following token.</p> <p>0878 4754 8529 3831 1045</p> <p>1638.4 m³ credit token encoded using DCTK₁.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 1643.4 m³.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
15	<p>Insert the following token.</p> <p>3486 9632 3983 0253 2124</p> <p>18022.4 m³ credit token encoded using DCTK₁.</p>	<p>If 19665.8 m³ is greater than the maximum amount of available credit that the meter can store as specified in Table 1 then the meter shall reject the token.</p> <p>Otherwise, the PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 19665.8 m³.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
16	<p>Insert the following token.</p> <p>2696 8535 8651 3600 9446</p> <p>181862.4 m³ credit token encoded using DCTK₁.</p>	<p>If 201528.2 m³ is greater than the maximum amount of available credit that the meter can store as specified in Table 1 then the meter shall reject the token.</p> <p>Otherwise, the meter shall indicate the acceptance of the token as described by the manufacturer in Table 1. The available credit in the meter shall be 201528.2 m³.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
17	<p>Insert the following token</p> <p>1926 3744 5978 4038 1376</p> <p>5 m³ credit token encoded using DCTK₁.</p>	<p>Record the available credit in the PM or customer interface terminal to ensure that this step does not alter the available credit in any way. The PM or customer interface terminal shall reject the token as "Used". The available credit in the meter shall not change.</p>
18	<p>Insert the following token.</p> <p>0878 4754 8529 3831 1045</p> <p>1638.4 m³ credit token encoded using DCTK₁.</p>	<p>Record the available credit in the PM or customer interface terminal to ensure that this step does not alter the available credit in any way. The PM or customer interface terminal shall reject the token as "Used". The available credit in the meter shall not change.</p>

For time meters – do steps 19 to 24.

Step	Instruction	Expected Result
19	Insert the following token 6892 6857 8989 1618 1433 5 min credit token encoded using DCTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 5 min. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
20	Insert the following token. 6582 8168 6582 3122 9859 1638 min credit token encoded using DCTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 1643 min. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
21	Insert the following token. 4916 2401 6356 0297 3125 18022 min credit token encoded using DCTK ₁ .	If 19665 min is greater than the maximum amount of available credit that the meter can store as specified in Table 1 then the meter shall reject the token. Otherwise, the PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 19665 min. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
22	Insert the following token. 4600 2771 6157 1754 5757 181862 min credit token encoded using DCTK ₁ .	If 201528 min is greater than the maximum amount of available credit that the meter can store as specified in Table 1 then the meter shall reject the token. Otherwise, the meter shall indicate the acceptance of the token as described by the manufacturer in Table 1. The available credit in the meter shall be 201528 min. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
23	Insert the following token 6892 6857 8989 1618 1433 5 min credit token encoded using DCTK ₁ .	Record the available credit in the PM or customer interface terminal to ensure that this step does not alter the available credit in any way. The PM or customer interface terminal shall reject the token as "Used". The available credit in the meter shall not change.
24	Insert the following token. 6582 8168 6582 3122 9859 1638 min credit token encoded using DCTK ₁ .	Record the available credit in the PM or customer interface terminal to ensure that this step does not alter the available credit in any way. The PM or customer interface terminal shall reject the token as "Used". The available credit in the meter shall not change.

For electricity currency meters – do steps 25 to 30.

Step	Instruction	Expected Result
25	Insert the following token 6288 2525 5269 8767 2649 5000 unit credit token encoded using DCTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 5000 units. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
26	Insert the following token. 4976 6004 9351 3265 3626 16384 unit credit token encoded using DCTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 21384 units. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
27	Insert the following token. 0780 9461 2777 0794 8826 180224 unit credit token encoded using DCTK ₁ .	If 201608 units is greater than the maximum amount of available credit that the meter can store as specified in Table 1 then the meter shall reject the token. Otherwise, the PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 201608 units. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
28	Insert the following token. 4501 4000 3053 0955 2207 1818624 units credit token encoded using DCTK ₁ .	If 2020232 units is greater than the maximum amount of available credit that the meter can store as specified in Table 1 then the meter shall reject the token. Otherwise, the meter shall indicate the acceptance of the token as described by the manufacturer in Table 1. The available credit in the meter shall be 2020232 units. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
29	Insert the following token 6288 2525 5269 8767 2649 5000 units credit token encoded using DCTK ₁ .	Record the available credit in the PM or customer interface terminal to ensure that this step does not alter the available credit in any way. The PM or customer interface terminal shall reject the token as “Used”. The available credit in the meter shall not change.
30	Insert the following token. 4976 6004 9351 3265 3626 16384 units credit token encoded using DCTK ₁ .	Record the available credit in the PM or customer interface terminal to ensure that this step does not alter the available credit in any way. The PM or customer interface terminal shall reject the token as “Used”. The available credit in the meter shall not change.

For water currency meters – do steps 31 to 36.

Step	Instruction	Expected Result
31	Insert the following token 6540 8132 7435 4982 5733 5000 unit credit token encoded using DCTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 5000 units. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
32	Insert the following token. 2125 3401 9856 6041 6345 16384 unit credit token encoded using DCTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 21384 units. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
33	Insert the following token. 1677 1767 2032 8416 0689 180224 unit credit token encoded using DCTK ₁ .	If 201608 units is greater than the maximum amount of available credit that the meter can store as specified in Table 1 then the meter shall reject the token. Otherwise, the PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 201608 units. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
34	Insert the following token. 2309 3682 4182 3841 2397 1818624 units credit token encoded using DCTK ₁ .	If 2020232 units is greater than the maximum amount of available credit that the meter can store as specified in Table 1 then the meter shall reject the token. Otherwise, the meter shall indicate the acceptance of the token as described by the manufacturer in Table 1. The available credit in the meter shall be 2020232 units. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
35	Insert the following token 6540 8132 7435 4982 5733 5000 units credit token encoded using DCTK ₁ .	Record the available credit in the PM or customer interface terminal to ensure that this step does not alter the available credit in any way. The PM or customer interface terminal shall reject the token as "Used". The available credit in the meter shall not change.
36	Insert the following token. 2125 3401 9856 6041 6345 16384 units credit token encoded using DCTK ₁ .	Record the available credit in the PM or customer interface terminal to ensure that this step does not alter the available credit in any way. The PM or customer interface terminal shall reject the token as "Used". The available credit in the meter shall not change.

For gas currency meters – do steps 37 to 42.

Step	Instruction	Expected Result
37	Insert the following token 3429 3840 5554 2885 0711 5000 unit credit token encoded using DCTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 5000 units. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
38	Insert the following token. 6100 0748 6343 3186 2081 16384 unit credit token encoded using DCTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 21384 units. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
39	Insert the following token. 6212 8251 9201 0557 5327 180224 unit credit token encoded using DCTK ₁ .	If 201608 units is greater than the maximum amount of available credit that the meter can store as specified in Table 1 then the meter shall reject the token. Otherwise, the PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 201608 units. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
40	Insert the following token. 5331 4691 8907 9260 4198 1818624 units credit token encoded using DCTK ₁ .	If 2020232 units is greater than the maximum amount of available credit that the meter can store as specified in Table 1 then the meter shall reject the token. Otherwise, the meter shall indicate the acceptance of the token as described by the manufacturer in Table 1. The available credit in the meter shall be 2020232 units. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
41	Insert the following token 3429 3840 5554 2885 0711 5000 units credit token encoded using DCTK ₁ .	Record the available credit in the PM or customer interface terminal to ensure that this step does not alter the available credit in any way. The PM or customer interface terminal shall reject the token as "Used". The available credit in the meter shall not change.
42	Insert the following token. 6100 0748 6343 3186 2081 16384 units credit token encoded using DCTK ₁ .	Record the available credit in the PM or customer interface terminal to ensure that this step does not alter the available credit in any way. The PM or customer interface terminal shall reject the token as "Used". The available credit in the meter shall not change.

For time currency meters – do steps 43 to 48.

Step	Instruction	Expected Result
43	Insert the following token 7315 5725 4056 0166 6354 5000 unit credit token encoded using DCTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 5000 units. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
44	Insert the following token. 3271 8211 8227 6034 6688 16384 unit credit token encoded using DCTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 21384 units. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
45	Insert the following token. 4305 4987 0865 8550 7999 180224 unit credit token encoded using DCTK ₁ .	If 201608 units is greater than the maximum amount of available credit that the meter can store as specified in Table 1 then the meter shall reject the token. Otherwise, the PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 201608 units. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
46	Insert the following token. 0203 6593 1566 7242 3153 1818624 units credit token encoded using DCTK ₁ .	If 2020232 units is greater than the maximum amount of available credit that the meter can store as specified in Table 1 then the meter shall reject the token. Otherwise, the meter shall indicate the acceptance of the token as described by the manufacturer in Table 1. The available credit in the meter shall be 2020232 units. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
47	Insert the following token 7315 5725 4056 0166 6354 5000 units credit token encoded using DCTK ₁ .	Record the available credit in the PM or customer interface terminal to ensure that this step does not alter the available credit in any way. The PM or customer interface terminal shall reject the token as "Used". The available credit in the meter shall not change.
48	Insert the following token. 3271 8211 8227 6034 6688 16384 units credit token encoded using DCTK ₁ .	Record the available credit in the PM or customer interface terminal to ensure that this step does not alter the available credit in any way. The PM or customer interface terminal shall reject the token as "Used". The available credit in the meter shall not change.

4.1.11 CTSF08 – DCTK coded accepting maximum power limit token

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of a SetMaximumPowerLimit token while loaded with a DCTK.

Note: this test is only required for electricity meters that support this feature.

Step	Instruction	Expected Result
1	<p>If the manufacturer's response in Table 1 indicates that initiate test number 7 is supported, insert token</p> <p>For 11 digit DRN meters: 0000 0000 0012 0797 4400</p> <p>For 13 digit DRN meters: 0115 2921 7796 1897 3828</p> <p>Initiate PM Test number 7 (Display maximum power limit), otherwise, skip this step.</p>	<p>The PM or customer interface terminal shall display the maximum power limit.</p>
2	<p>Insert the following token</p> <p>2799 8942 2914 0324 9832</p> <p>2.3 kilowatt Set maximum power limit token encoded using DCTK₁.</p>	<p>The PM or customer interface terminal shall indicate acceptance of the token.</p>
3	<p>If the manufacturer's response in Table 1 indicates that initiate test number 7 is supported, insert token</p> <p>For 11 digit DRN meters: 0000 0000 0012 0797 4400</p> <p>For 13 digit DRN meters: 0115 2921 7796 1897 3828</p> <p>Initiate PM Test number 7 (Display maximum power limit), otherwise, skip this step.</p>	<p>The PM or customer interface terminal shall display the maximum power limit of 2.3 kilowatts.</p>
4	<p>Insert the following token</p> <p>4282 8272 2292 4223 8363</p> <p>1.0 kilowatt Set maximum power limit token encoded using DCTK₁.</p>	<p>The PM or customer interface terminal shall indicate acceptance of the token.</p>
5	<p>If the manufacturer's response in Table 1 indicates that initiate test number 7 is supported, insert token</p> <p>For 11 digit DRN meters: 0000 0000 0012 0797 4400</p> <p>For 13 digit DRN meters: 0115 2921 7796 1897 3828</p> <p>Initiate PM Test number 7 (Display maximum power limit), otherwise, skip this step.</p>	<p>The PM or customer interface terminal shall display the maximum power limit of 1.0 kilowatts.</p>

4.1.12 CTSF09 – DCTK coded accepting clear PM electricity credit

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of ClearCredit token while loaded with a DCTK and explicitly nominating the electricity register in the PM.

Note: this test is only required for electricity meters.

Step	Instruction	Expected Result
1	Insert the following token 2280 8566 8932 8700 7677 Clear electricity credit token encoded using the DCTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 0 kilowatt-hours. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

4.1.13 CTSF10 – DCTK coded accepting clear PM water credit

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of ClearCredit token while loaded with a DCTK and explicitly nominating the water register in the PM.

Note: this test is only required for water meters.

Step	Instruction	Expected Result
1	Insert the following token 5827 4888 1999 3720 6554 Clear water credit token encoded using the DCTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 0 kl. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

4.1.14 CTSF11 – DCTK coded accepting clear PM gas credit

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of ClearCredit token while loaded with a DCTK and explicitly nominating the gas register in the PM.

Note: this test is only required for gas meters.

Step	Instruction	Expected Result
1	Insert the following token 6143 5393 8972 1711 2128 Clear gas credit token encoded using the DCTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 0 m ³ . After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

4.1.15 CTSF12 – DCTK coded accepting clear PM connection time credit

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of ClearCredit token while loaded with a DCTK and explicitly nominating the connection time register in the PM.

Note: this test is only required for connection time meters.

Step	Instruction	Expected Result
1	Insert the following token 1914 0850 4907 2382 1725 Clear connection time credit token encoded using the DCTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 0 min. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

4.1.16 CTSF13 – DCTK coded accepting clear PM currency credit

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of ClearCredit token while loaded with a DCTK and explicitly nominating the connection time register in the PM.

Note: this test is only required for currency based meters.

Do only tests steps for the currency type supported by the PM.

Step	Instruction	Expected Result
1	Insert the following token For electricity currency 0610 9632 4940 1781 9179 Clear electricity currency credit token encoded using the DCTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 0 currency units. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
2	Insert the following token For water currency 5322 0141 6756 5845 4405 Clear water currency credit token encoded using the DCTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 0 currency units. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
3	Insert the following token For gas currency 5756 5626 2519 0437 4927 Clear gas currency credit token encoded using the DCTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 0 currency units. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

Step	Instruction	Expected Result
4	Insert the following token For time currency 1090 3946 9503 6700 5418 Clear time currency credit token encoded using the DCTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 0 currency units. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

4.1.17 CTSF14 – DCTK coded accepting clear PM all credit registers

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of the ClearCredit token while loaded with a DCTK and explicitly nominating all registers in the PM.

Step	Instruction	Expected Result
1	Insert the following token 5956 1336 9230 8843 5145 Clear all credit registers token encoded using the DCTK ₁	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 0 units. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

4.1.18 CTSF15 – DCTK coded accepting clear PM reserved credit registers

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of the ClearCredit token while loaded with a DCTK and explicitly nominating reserved registers.

Step	Instruction	Expected Result
1	Insert the following token 5241 4131 5686 7018 4299 Clear credit register number 8 token encoded using the DCTK ₁	The PM or customer interface terminal shall reject the token.
2	Insert the following token 5845 1699 0885 0102 1321 Clear credit register number FFFE ₁₆ token encoded using the DCTK ₁	The PM or customer interface terminal shall reject the token.

4.1.19 CTSF16 – DCTK coded processing set PM key with roll over

Overview: This test verifies the MeterApplicationProcess for compliance with respect to a DCTK key change with the roll over flag set.

Step	Instruction	Expected Result
1	<p>Insert the following token</p> <p>1675 1745 0709 8431 7627</p> <p>First token of Set PM Key token pair. DCTK₁ to DCTK₂ key-change token. (KENHO = F, KRN = 1, RO = 0, Res = 0, KT = 3)</p>	<p>The PM or customer interface terminal shall indicate the acceptance of the first "Set PM key" token.</p>
2	<p>Insert the following token</p> <p>2063 2706 7522 4131 5994</p> <p>Second token of Set PM Key token pair. DCTK₁ to DCTK₂ key-change token. (KENLO = F, TI = 01)</p>	<p>The PM or customer interface terminal shall indicate the acceptance of the second "Set PM key" token.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
3	<p>Insert the following token</p> <p>5788 6225 2367 7214 1727</p> <p>First token of Set PM Key token pair. DCTK₂ to DCTK₁ key-change token. (KENHO = F, KRN = 1, RO = 1, Res = 0, KT = 3)</p>	<p>The PM or customer interface terminal shall indicate the acceptance of the first "Set PM key" token.</p>
4	<p>Insert the following token</p> <p>5301 1771 7223 2836 6493</p> <p>Second token of Set PM Key token pair. DCTK₂ to DCTK₁ key-change token. (KENLO = F, TI = 01)</p>	<p>The PM or customer interface terminal shall indicate the acceptance of the second "Set PM key" token.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
5	<p>Insert the following token</p> <p>2635 0104 1918 2604 0746</p> <p>Clear all credit registers token encoded using the DCTK₁.</p> <p>TID value greater than Step 6 TID.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 0.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
6	<p>Insert the following token</p> <p>2404 5934 6345 2567 5282</p> <p>Clear all credit registers token encoded using the DCTK₁.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 0.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

Step	Instruction	Expected Result
7	<p>Insert the following token.</p> <p>For 11 digit DRN meters: 5649 3153 7254 5031 3471</p> <p>For 13 digit DRN meters: 0230 5843 0050 5295 1967</p> <p>Test token – Test number 0.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The PM or customer interface terminal should then perform the following tests:</p> <ol style="list-style-type: none"> 1. Test the load switch. If the manufacturers response in Table1 is that the load switch test is not supported, then the load switch should not be tested and this step may be skipped. 2. Test the meter information display services. 3. Display the cumulative consumption register totals. 4. Display 1 for the KRN. 5. Display the Tariff Index 6. If the response in Table 1 indicates that test number 6 token is supported, test the token reader device. 7. If the response in Table 1 indicates that test number 7 token is supported, display the maximum power limit. 8. If the response in Table 1 indicates that test number 8 token is supported, display the tamper status. 9. If the response in Table 1 indicates that test number 9 token is supported, display the power consumption. 10. Display the software version. 11. If the response in Table 1 indicates that test number 11 token is supported, display the phase power unbalance limit. 12. Reserved 13. Reserved 14. Display the EA value 15. Display the number of keychange tokens supported 16. If the response in Table 1 indicates that test number 16 token is supported, display the SGC value 17. Display the KEN value 18. Display the DRN <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

4.1.20 CTSF17 – DCTK coded processing clear tamper condition

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of the ClearTamperCondition token while loaded with a DCTK.

Step	Instruction	Expected Result
1	<p>If the manufacturer's response in Table 1 indicates that the submitted meter has a tamper detect capability, and it is activated, place the meter in a tamper state following the manufacturer's instructions as described in Table 1.</p>	<p>The PM or customer interface terminal should indicate that the PM is in a tamper state.</p>

Step	Instruction	Expected Result
2	Insert the following token: 0067 8500 7837 1741 2164 Clear tamper condition encoded using DCTK ₁ .	If the manufacturer's response in Table 1 indicates that the submitted meter has a tamper detect capability, and it is activated, the PM or customer interface terminal should indicate the acceptance of the token. Note that this token may be accepted even if the tamper detect capability is disabled. If the manufacturer's response in Table 1 indicates that the meter does not support tamper, the PM or customer interface terminal shall reject the token After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
3	Insert the following token. For 11 digit DRN meters: 5649 3153 7254 5031 3471 For 13 digit DRN meters: 0230 5843 0050 5295 1967 Test token – Test number 0.	The PM or customer interface terminal should indicate the acceptance of the token. The PM or customer interface terminal should then perform the following tests: 1. Test the load switch. If the manufacturers response in Table1 is that the load switch test is not supported, then the load switch should not be tested and this step may be skipped. 2. Test the meter information display services. 3. Display the cumulative consumption register totals. 4. Display 1 for the key revision number. 5. Display the Tariff Index 6. If the response in Table 1 indicates that test number 6 token is supported, test the token reader device. 7. If the response in Table 1 indicates that test number 7 token is supported, display the maximum power limit. 8. If the response in Table 1 indicates that test number 8 token is supported, display the tamper status as clear. 9. If the response in Table 1 indicates that test number 9 token is supported, display the power consumption. 10. Display the software version. 11. If the response in Table 1 indicates that test number 11 token is supported, display the phase power unbalance limit. 12. Reserved 13. Reserved 14. Display the EA value 15. Display the number of keychange tokens supported 16. If the response in Table 1 indicates that test number 16 token is supported, display the SGC value 17. Display the KEN value 18. Display the DRN After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

4.1.21 CTSF18 – DCTK coded processing set phase unbalance limit

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of the SetMaximumPhasePowerUnbalanceLimit token while loaded with a DCTK.

Note: this test only required for electricity payment meters.

Step	Instruction	Expected Result
1	<p>If the manufacturer's response in Table 1 indicates that the meter is a poly-phase meter, insert token</p> <p>3458 5158 6138 7242 8514</p> <p>set maximum phase power unbalance limit token encoded using DCTK₁. (MPPUL = 1 kilowatt), otherwise, skip this step.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
2	<p>If the manufacturer's response in Table 1 indicates that the meter is not a poly-phase meter, or does not support phase unbalance, insert token</p> <p>3458 5158 6138 7242 8514</p> <p>Set maximum phase power unbalance limit token encoded using DCTK₁. (MPPUL = 1 kilowatt).</p>	<p>The PM or customer interface terminal shall reject the token.</p>
3	<p>Insert the following token.</p> <p>For 11 digit DRN meters:</p> <p>5649 3153 7254 5031 3471</p> <p>For 13 digit DRN meters:</p> <p>0230 5843 0050 5295 1967</p> <p>Test token – Test number 0.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The PM or customer interface terminal should then perform the following tests:</p> <ol style="list-style-type: none"> 1. Test the load switch. If the manufacturers response in Table1 is that the load switch test is not supported, then the load switch should not be tested and this step may be skipped. 2. Test the meter information display services. 3. Display the cumulative consumption register totals. 4. Display 1 for the key revision number. 5. Display the Tariff Index. 6. If the response in Table 1 indicates that test number 6 token is supported, test the token reader device. 7. If the response in Table 1 indicates that test number 7 token is supported, display the maximum power limit. 8. If the response in Table 1 indicates that test number 8 token is supported, display the tamper status as clear. 9. If the response in Table 1 indicates that test number 9 token is supported, display the power consumption. 10. Display the software version. 11. If the response in Table 1 indicates that test number 11 token is supported, display the phase power unbalance limit as 1 kilowatt. 12. Reserved 13. Reserved 14. Display the EA value 15. Display the number of keychange tokens supported 16. If the response in Table 1 indicates that test number 16 token is supported, display the SGC value 17. Display the KEN value 18. Display the DRN <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

4.1.22 CTSF19 – DCTK coded Class 2 token

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of Class 2 tokens while loaded with a DCTK.

Step	Instruction	Expected Result
1	<p>Insert the following token</p> <p>3313 4475 3921 5119 0258</p> <p>STS reserved token in class 10₂ encoded using DCTK₁. (Sub class = 11)</p>	<p>The PM or customer interface terminal shall reject the token. Note that a payment meter may accept this token if proprietary tokens have been implemented, but in this case, this shall not form part of the test.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
2	<p>Insert the following token</p> <p>1425 4684 3491 0705 7896</p> <p>DCTK₁ coded Class2 SubClass10 token. (Index = 63, FlagIndex = 0, FlagValue = 0)</p>	<p>If the manufacturer has stated in Table 1 that the payment meter supports Class2 SubClass10 SetFlag tokens as specified in STS202-5, the PM or customer interface terminal shall accept the token.</p> <p>Otherwise, the payment meter shall reject the token and Steps 3-5 may be omitted.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
3	<p>Read the flag 0</p> <p>0344 0750 1154 4527 9822</p>	<p>The PM shall indicate a value of 0 for the flag value.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
4	<p>Insert the following token</p> <p>1618 9519 6141 6853 4501</p> <p>DCTK₁ coded Class2 SubClass10 token. (Index = 63, FlagIndex = 0, FlagValue = 1)</p>	<p>The PM or customer interface terminal shall accept the token.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
5	<p>Read the flag 0</p> <p>0344 0750 1154 4527 9822</p>	<p>The PM shall indicate a value of 1 for the flag value.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
6	<p>Insert the following token</p> <p>6489 1712 4120 4289 3220</p> <p>DCTK₁ coded Class2 SubClass10 token. (Index = 0, ControlValue = 0)</p>	<p>If the manufacturer has stated in Table 1 that the payment meter supports Class2 SubClass10 SetControlValue tokens as specified in STS202-5, the PM or customer interface terminal shall accept the token.</p> <p>Otherwise, the payment meter shall reject the token and Steps 7-9 may be omitted</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
7	<p>Read the control value</p> <p>0230 5843 0093 4791 4912</p>	<p>The PM shall indicate a value of 0 for the control value.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
8	<p>Insert the following token</p> <p>4033 1990 0318 3854 6083</p> <p>DCTK₁ coded Class2 SubClass10 token. (Index = 0, ControlValue = 0123)</p>	<p>The PM or customer interface terminal shall accept the token.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
9	<p>Read the control value</p> <p>0230 5843 0093 4791 4912</p>	<p>The PM shall indicate a value of 0123 for the control value.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

4.1.23 CTSF20 – DCTK coded class 3 STS reserved token

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of Class 3 reserved tokens while loaded with a DCTK.

Step	Instruction	Expected Result
1	Insert the following token 6444 0635 4953 8193 1806 STS reserved token in class 11 ₂ encoded using DCTK ₁ . (Sub class = 0)	The PM or customer interface terminal shall reject the token. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

4.1.24 CTSF21 – DCTK to DITK key change

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the DCTK to DITK key change.

Step	Instruction	Expected Result
1	Insert the following token 2600 2847 6597 6555 7836 First token of Set PM Key token pair. DCTK ₁ to DITK ₀ key-change token. (KENHO = F, KRN = 1, RO = 1, Res = 0, KT = 0)	The meter shall reject this key change request with a TokenResult of Reject. . (if the token is rejected at this stage, do not continue with this test). After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
2	Insert the following token. 1765 0136 1927 5115 7852 Second token of Set PM Key token pair. DCTK ₁ to DITK ₀ key-change token. (KENHO = F, TI = 01)	The PM or customer interface terminal shall reject the token. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

4.1.25 CTSF22 – DCTK coded accepting tokens when in power limiting state

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the meter accepting tokens while in a power limiting state.

Note: this test only required for electricity meters that support this feature.

Step	Instruction	Expected Result
1	Unpower the PM, Connect the 1.2kW load, and re-power the PM.	After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token. Wait for the PM to enter a power limiting state as described by the manufacturer in Table 1.
2	Insert the following token 6938 2484 5639 9342 8827 Clear credit token encoded using DCTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

Note: For tests CTSF23 to CTSF57, use UUT02.
 Power up UUT02 according to the manufacturers instructions. The PM or customer interface terminal should indicate that it is ready to accept a token as described by the manufacturer in Table1.

4.1.26 CTSF23 – DITK to DDTK key change

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the DITK to DDTK key change.

Step	Instruction	Expected Result
1	<p>Power up UUT02</p> <p>Insert the following token</p> <p>4571 8437 7022 7470 9316</p> <p>First token of Set PM Key token pair. DITK₁ to DDTK₀ key-change token. (KENHO = F, KRN = 1, RO = 0, Res = 0, KT = 1)</p>	<p>The PM or customer interface terminal shall indicate the acceptance of the token.</p>
2	<p>Insert the following token</p> <p>6933 2307 3817 6284 2323</p> <p>Second token of Set PM Key token pair. DITK₁ to DDTK₀ key-change token. (KENLO = F, TI = 01)</p>	<p>The PM or customer interface terminal shall indicate the acceptance of the token.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

4.1.27 CTSF24 – DDTK to DDTK key change

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the DDTK to DDTK key change.

Step	Instruction	Expected Result
1	<p>Insert the following token</p> <p>6613 3632 6113 2866 7750</p> <p>First token of Set PM Key token pair. DDTK₀ to DDTK₁ key-change token. (KENHO = F, KRN = 1, RO = 0, Res = 0, KT = 1)</p>	<p>The PM or customer interface terminal shall indicate the acceptance of the token.</p>
2	<p>Insert the following token</p> <p>3073 3383 2019 3954 8614</p> <p>Second token of Set PM Key token pair. DDTK₀ to DDTK₁ key-change token. (KENLO = F, TI = 01)</p>	<p>The PM or customer interface terminal shall indicate the acceptance of the token.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

4.1.28 CTSF25 – DDTK coded accepting credit token

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of a TransferCredit tokens while loaded with a DDTK. This test verifies that TransferCredit tokens are not accepted when loaded with a DDTK.

Step	Instruction	Expected Result
1	<p>Insert the following token encoded using DDTK₁.</p> <p>Electricity meters: 5 kWh credit token 5944 7058 0210 9892 7801</p> <p>water meters: 5 kl credit token 1745 3974 7903 4320 9420</p> <p>gas meters: 5 m³ credit token 4526 3903 9469 7965 8736</p> <p>time meters: 5 min credit token 1147 4573 3957 1466 9601</p> <p>For currency based meters insert the following:</p> <p>electricity currency meters: 5000 unit currency token 2246 2263 4770 2711 6584</p> <p>water currency meters: 5000 unit currency token 0433 8834 3466 5568 6646</p> <p>gas currency meters: 5000 unit currency token 2045 1464 7869 7801 1448</p> <p>time currency meters: 5000 unit currency token 1704 8083 2982 5820 5818</p>	<p>The PM or customer interface terminal shall reject the token.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

4.1.29 CTSF26 – DDTK coded accepting maximum power limit token

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of a SetMaximumPowerLimit token while loaded with a DDTK.

Note: this test only required for electricity meters that support this feature.

Step	Instruction	Expected Result
1	<p>Insert token</p> <p>For 11 digit DRN meters:</p> <p>0000 0000 0012 0797 4400</p> <p>For 13 digit DRN meters:</p> <p>0115 2921 7796 1897 3828</p> <p>Initiate PM Test number 7 (Display maximum power limit).</p>	<p>The PM or customer interface terminal shall display the maximum power limit if this function is supported, otherwise, skip this step.</p>
2	<p>Insert the following token</p> <p>1619 2841 6859 2641 5876</p> <p>2.3 kW Set maximum power limit token encoded using DDTK₁.</p>	<p>The PM or customer interface terminal shall indicate acceptance of the token.</p>
3	<p>Insert token</p> <p>For 11 digit DRN meters:</p> <p>0000 0000 0012 0797 4400</p> <p>For 13 digit DRN meters:</p> <p>0115 2921 7796 1897 3828</p> <p>Initiate PM Test number 7 (Display maximum power limit).</p>	<p>The PM or customer interface terminal shall display the maximum power limit of 2.3 kW if this function is supported, otherwise, skip this step.</p>
4	<p>Insert the following token</p> <p>7053 7529 6732 4648 4508</p> <p>1 kW Set maximum power limit token encoded using DDTK₁.</p>	<p>The PM or customer interface terminal shall indicate acceptance of the token.</p>
5	<p>Insert token</p> <p>For 11 digit DRN meters:</p> <p>0000 0000 0012 0797 4400</p> <p>For 13 digit DRN meters:</p> <p>0115 2921 7796 1897 3828</p> <p>Initiate PM Test number 7 (Display maximum power limit).</p>	<p>The PM or customer interface terminal shall display the maximum power limit of 1.0 kW if this function is supported, otherwise, skip this step.</p>

4.1.30 CTSF27 – DDTK coded accepting clear PM electricity credit

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of ClearCredit token while loaded with a DDTK and explicitly nominating the utility register in the PM.

Note: this test only required for electricity meters.

Step	Instruction	Expected Result
1	Insert the following token 3646 6623 6473 5703 1743 Clear electricity credit token encoded using the DDTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 0 kWh. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

4.1.31 CTSF28 – DDTK coded accepting clear PM water credit

Note: this test only required for water meters.

Step	Instruction	Expected Result
1	Insert the following token 2907 7417 1489 8723 6313 Clear water credit token encoded using the DDTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 0 kL. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

4.1.32 CTSF29 – DDTK coded accepting clear PM gas credit

Note: this test only required for gas meters.

Step	Instruction	Expected Result
1	Insert the following token 0560 5506 9237 8327 5619 Clear gas credit token encoded using DDTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 0 m ³ . After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

4.1.33 CTSF30 – DDTK coded accepting clear PM connection time credit

Note: this test only required for connection time meters.

Step	Instruction	Expected Result
1	Insert the following token 1425 9516 0305 1092 1923 Clear time credit token encoded using DDTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 0 min. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

4.1.34 CTSF31 – DDTK coded accepting clear PM currency credit

Note: this test only required for currency based meters.

Step	Instruction	Expected Result
1	Insert the following token 0340 9371 5108 7123 3072 Clear electricity currency credit token encoded using DDTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 0 units After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
2	Insert the following token 2054 2862 0713 7738 1995 Clear water currency credit token encoded using DDTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 0 units After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
3	Insert the following token 2433 7061 6439 3533 3660 Clear gas currency credit token encoded using DDTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 0 units After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
4	Insert the following token 0155 2225 0261 9998 4107 Clear time currency credit token encoded using DDTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 0 units After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

4.1.35 CTSF32 – DDTK coded accepting clear PM all credit registers

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of the ClearCredit token while loaded with a DDTK and explicitly nominating all registers in the PM.

Step	Instruction	Expected Result
1	Insert the following token 3504 6096 2462 4305 0843 Clear all credit registers token encoded using DDTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 0 credit units. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

4.1.36 CTSF33 – DDTK coded accepting clear PM reserved credit registers

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of the ClearCredit token while loaded with a DDTK and explicitly nominating reserved registers.

Step	Instruction	Expected Result
1	Insert the following token 2644 0310 8364 0068 1431 Clear credit register number 8 token encoded using the DDTK ₁ .	The PM or customer interface terminal shall reject the token.
2	Insert the following token 0420 5440 4258 5796 9446 Clear credit register number FFFE ₁₆ token encoded using the DDTK ₁ .	The PM or customer interface terminal shall reject the token.

4.1.37 CTSF34 – DDTK coded processing set tariff rate

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of SetTarrifRate token while loaded with a DDTK.

Note: this test only required for electricity meters

Step	Instruction	Expected Result
1	Insert the following token 6301 2207 1404 8753 8981 Set tariff rate token encoded using the DDTK ₁ .	The PM or customer interface terminal shall reject the token.

4.1.38 CTSF35 – DDTK coded processing set PM key with roll over

Overview: This test verifies the MeterApplicationProcess for compliance with respect to a DDTK key change with the roll over flag set.

Step	Instruction	Expected Result
1	Insert the following token 4675 7901 7106 2897 2573 First token of Set PM Key token pair. DDTK ₁ to DDTK ₂ key-change token. (KENHO = F, KRN = 1, RO = 0, Res = 0, KT = 1)	The PM or customer interface terminal shall indicate the acceptance of the first "Set PM key" token.
2	Insert the following token 7365 8227 1278 5341 1008 Second token of Set PM Key token pair. DDTK ₁ to DDTK ₂ key-change token. (KENLO = F, TI = 01)	The PM or customer interface terminal shall indicate the acceptance of the second "Set PM key" token. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

Step	Instruction	Expected Result
3	<p>Insert the following token</p> <p>7218 0413 2478 4305 4867</p> <p>First token of Set PM Key token pair. DDTK₂ to DDTK₁ key-change token. (KENHO = F, KRN = 1, RO = 1, Res = 0, KT = 1)</p>	<p>The PM or customer interface terminal shall indicate the acceptance of the first "Set PM key" token.</p>
4	<p>Insert the following token</p> <p>0166 5447 4439 0430 2255</p> <p>Second token of Set PM Key token pair. DDTK₂ to DDTK₁ key-change token. (KENLO = F, TI = 01)</p>	<p>The PM or customer interface terminal shall indicate the acceptance of the second "Set PM key" token.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
5	<p>Insert the following token encoded using the DDTK₁</p> <p>7126 3511 8559 1529 7472</p> <p>Clear all credit registers token encoded using the DDTK₁.</p> <p>TID value greater than Step 6 TID.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 0 units.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p> <p>The payment meter shall reject a token for any unsupported utility type</p>
6	<p>Insert the following token encoded using the DDTK₁</p> <p>6269 2451 3210 7299 0378</p> <p>Clear all credit registers token encoded using the DDTK₁.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 0 units.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p> <p>The payment meter shall reject a token for any unsupported utility type</p>

4.1.39 CTSF36 – DDTK coded processing clear tamper condition

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of the ClearTamperCondition token while loaded with a DDTK.

Step	Instruction	Expected Result
1	<p>If the manufacturer's response in Table 1 indicates that the submitted meter has a tamper detect capability, and it is activated, place the meter in a tamper state following the manufacturer's instructions as described in Table 1.</p>	<p>The PM or customer interface terminal should indicate that it is in a tamper state as described by the manufacturer in Table 1.</p>

Step	Instruction	Expected Result
2	<p>Insert the following token.</p> <p>For 11 digit DRN meters: 5649 3153 7254 5031 3471</p> <p>For 13 digit DRN meters: 0230 5843 0050 5295 1967</p> <p>Test token – Test number 0.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The PM or customer interface terminal should then perform the following tests:</p> <ol style="list-style-type: none"> 1. Test the load switch. If the manufacturers response in Table1 is that the load switch test is not supported, then the load switch should not be tested and this step may be skipped. 2. Test the meter information display services. 3. Display the cumulative consumption register totals. 4. Display 1 for the key revision number. 5. Display the TI. 6. If the response in Table 1 indicates that test number 6 token is supported, test the token reader device. 7. If the response in Table 1 indicates that test number 7 token is supported, display the maximum power limit. 8. If the response in Table 1 indicates that test number 8 token is supported, display the tamper status as set if the meter supports tamper. 9. If the response in Table 1 indicates that test number 9 token is supported, display the power consumption. 10. Display the software version. 11. If the response in Table 1 indicates that test number 11 token is supported, display the phase power unbalance limit. 12. Reserved 13. Reserved 14. Display the EA value 15. Display the number of keychange tokens supported 16. If the response in Table 1 indicates that test number 16 token is supported, display the SGC value 17. Display the KEN value 18. Display the DRN <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
3	<p>Insert the following token</p> <p>4433 5810 7123 0714 3424</p> <p>Clear tamper condition encoded using DDTK₁.</p>	<p>If tamper is supported, the PM or customer interface terminal should indicate the acceptance of the token.</p> <p>If the PM has a tamper detect capability implemented, but disabled, the interface terminal may accept the token but take no action.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

Step	Instruction	Expected Result
4	<p>Insert the following token</p> <p>For 11 digit DRN meters: 5649 3153 7254 5031 3471</p> <p>For 13 digit DRN Meters: 0230 5843 0050 5295 1967</p> <p>Test token – Test number 0.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The PM or customer interface terminal should then perform the following tests:</p> <ol style="list-style-type: none"> 1. Test the load switch. If the manufacturers response in Table1 is that the load switch test is not supported, then the load switch should not be tested and this step may be skipped. 2. Test the meter information display services. 3. Display the cumulative consumption register totals. 4. Display 1 for the key revision number. 5. Display the Tariff Index 6. If the response in Table 1 indicates that test number 6 token is supported, test the token reader device. 7. If the response in Table 1 indicates that test number 7 token is supported, display the maximum power limit. 8. If the response in Table 1 indicates that test number 8 token is supported, display the tamper status as clear. 9. If the response in Table 1 indicates that test number 9 token is supported, display the power consumption. 10. Display the software version. 11. If the response in Table 1 indicates that test number 11 token is supported, display the phase power unbalance limit. 12. Reserved 13. Reserved 14. Display the EA value 15. Display the number of keychange tokens supported 16. If the response in Table 1 indicates that test number 16 token is supported, display the SGC value 17. Display the KEN value 18. Display the DRN <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

4.1.40 CTSF37 – DDTK coded processing set phase unbalance limit

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of the SetMaximumPhasePowerUnbalanceLimit token while loaded with a DDTK.

Note: this test only required for electricity payment meters that support PhaseUnbalance.

Step	Instruction	Expected Result
1	<p>If the meter is a poly-phase meter and supports phase unbalance, insert token</p> <p>4244 5519 6006 3024 5814</p> <p>Set maximum phase power unbalance limit token encoded using DDTK₁. (MPPUL = 1 kilowatt), otherwise, skip this step.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
2	<p>Insert the following token</p> <p>For 11 digit DRN meters:</p> <p>5649 3153 7254 5031 3471</p> <p>For 13 digit DRN Meters:</p> <p>0230 5843 0050 5295 1967</p> <p>Test token – Test number 0.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The PM or customer interface terminal should then perform the following tests:</p> <ol style="list-style-type: none"> 1. Test the load switch. If the manufacturers response in Table1 is that the load switch test is not supported, then the load switch should not be tested and this step may be skipped. 2. Test the meter information display services. 3. Display the cumulative consumption register totals. 4. Display 1 for the key revision number. 5. Display the Tariff Index 6. If the response in Table 1 indicates that test number 6 token is supported, test the token reader device. 7. If the response in Table 1 indicates that test number 7 token is supported, display the maximum power limit. 8. If the response in Table 1 indicates that test number 8 token is supported, display the tamper status as clear. 9. If the response in Table 1 indicates that test number 9 token is supported, display the power consumption. 10. Display the software version. 11. If the response in Table 1 indicates that test number 11 token is supported, display the phase power unbalance limit as 1 kilowatt. 12. Reserved 13. Reserved 14. Display the EA value 15. Display the number of keychange tokens supported 16. If the response in Table 1 indicates that test number 16 token is supported, display the SGC value 17. Display the KEN value 18. Display the DRN <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

4.1.41 CTSF38 – DDTK coded processing set water meter factor

This token is reserved by the STS Association and compliance is currently not required.

4.1.42 CTSF39 – DDTK coded Class 2 token

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of Class 2 reserved tokens while loaded with a DDTK.

Step	Instruction	Expected Result
1	<p>Insert the following token</p> <p>1764 4261 6443 2596 3373</p> <p>STS reserved token in class 10₂ encoded using DDTK₁. (Sub class = 11)</p>	<p>The PM or customer interface terminal shall reject the token. Note that a payment meter may accept this token if proprietary tokens have been implemented, but in this case, this shall not form part of the test.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
2	<p>Insert the following token</p> <p>3817 7351 2947 5254 9770</p> <p>DDTK₁ coded Class2 SubClass10 token. (Index = 63, FlagIndex = 0, FlagValue = 0)</p>	<p>If the manufacturer has stated in Table 1 that the payment meter supports Class2 SubClass10 SetFlag tokens, the PM or customer interface terminal shall accept the token.</p> <p>Otherwise, the payment meter shall reject the token and Steps 3-5 may be omitted.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
3	<p>Read the flag 0</p> <p>0344 0750 1154 4527 9822</p>	<p>The PM shall indicate a value of 0 for the flag value.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
4	<p>Insert the following token</p> <p>1997 0719 9285 8082 9284</p> <p>DDTK₁ coded Class2 SubClass10 token. (Index = 63, FlagIndex = 0, FlagValue = 1)</p>	<p>The PM or customer interface terminal shall accept the token.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
5	<p>Read the flag 0</p> <p>0344 0750 1154 4527 9822</p>	<p>The PM shall indicate a value of 1 for the flag value.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
6	<p>Insert the following token</p> <p>4935 0474 1858 4363 4641</p> <p>DDTK₁ coded Class2 SubClass10 token. (Index = 0, ControlValue = 0)</p>	<p>If the manufacturer has stated in Table 1 that the payment meter supports Class2 SubClass10 SetControlValue tokens, the PM or customer interface terminal shall accept the token.</p> <p>Otherwise, the payment meter shall reject the token and Steps 7-9 may be omitted.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
7	<p>Read the control value</p> <p>0230 5843 0093 4791 4912</p>	<p>The PM shall indicate a value of 0 for the control value.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

Step	Instruction	Expected Result
8	Insert the following token 1735 9390 5200 0229 3709 DDTK ₁ coded Class2 SubClass10 token. (Index = 0, ControlValue = 0123)	The PM or customer interface terminal shall accept the token. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
9	Read the control value 0230 5843 0093 4791 4912	The PM shall indicate a value of 0123 for the control value. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

4.1.43 CTSF40 – DDTK coded class 3 STS reserved token

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of Class 3 reserved tokens while loaded with a DDTK.

Step	Instruction	Expected Result
1	Insert the following token 6102 7402 8205 8298 8736 STS reserved token in class 11 ₂ encoded using DDTK ₁ . (Sub class = 0)	The PM or customer interface terminal shall reject the token. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

4.1.44 CTSF41 – DDTK coded class 0 STS reserved token

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of class 0 reserved tokens while loaded with a DDTK.

Step	Instruction	Expected Result
1	Insert the following token 3654 0140 8111 9329 2095 STS reserved token in class 00 ₂ encoded using DDTK ₁ . (Sub class = 10)	The PM or customer interface terminal shall reject the token. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

4.1.45 CTSF42 – DDTK coded accepting non-PM-specific test 1 token

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of the InitiateMeterTest/Display token, test 1, while loaded with a DDTK.

Step	Instruction	Expected Result
1	<p>Insert the following token</p> <p>For 11 digit DRN meters:</p> <p>0000 0000 0001 5099 7584</p> <p>For 13 digit DRN meters:</p> <p>0115 2921 5090 3605 4672</p> <p>Test token – Test number 1. (Test the load switch)</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token if the manufacturer has indicated that test number 1 is supported. Otherwise the token shall be rejected.</p> <p>If the load test is supported, the PM or customer interface terminal should then NOT test the load switch since the PM has no credit, unless the manufacturer's response in Table1 is that the latch should close under these conditions, then the load switch should be tested.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

4.1.46 CTSF43 – DDTK coded accepting non-PM-specific test 2 token

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of the InitiateMeterTest/Display token, test 2, while loaded with a DDTK.

Step	Instruction	Expected Result
1	<p>Insert the following token</p> <p>For 11 digit DRN meters:</p> <p>0000 0000 0001 6777 4880</p> <p>For 13 digit DRN meters:</p> <p>0115 2921 5133 3104 2448</p> <p>Test token – Test number 2. (Test information display devices)</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The PM or customer interface terminal should then test the meter information display services.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

4.1.47 CTSF44 – DDTK coded accepting non-PM-specific test 3 token

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of the InitiateMeterTest/Display token, test 3, while loaded with a DDTK.

Step	Instruction	Expected Result
1	<p>Insert the following token</p> <p>For 11 digit DRN meters:</p> <p>0000 0000 0002 0132 8896</p> <p>For 13 digit DRN meters:</p> <p>0115 2921 5219 2095 2465</p> <p>Test token – Test number 3. (Display cumulative register totals)</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The PM or customer interface terminal should then display the cumulative consumption register totals, which must be zero.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

4.1.48 CTSF45 – DDTK coded accepting non-PM-specific test 4 token

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of the InitiateMeterTest/Display token, test 4, while loaded with a DDTK.

Step	Instruction	Expected Result
1	<p>Insert the following token</p> <p>For 11 digit DRN meters:</p> <p>1844 6744 0738 4377 2416</p> <p>For 13 digit DRN meters:</p> <p>0115 2921 5391 0083 8034</p> <p>Test token – Test number 4. (Display the KRN)</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The PM or customer interface terminal should then display the key revision number.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

4.1.49 CTSF46 – DDTK coded accepting non-PM-specific test 5 token

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of the InitiateMeterTest/Display token, test 5, while loaded with a DDTK.

Step	Instruction	Expected Result
1	Insert the following token For 11 digit DRN meters: 3689 3488 1475 5332 2496 For 13 digit DRN meters: 0115 2921 5734 6054 3637 Test token – Test number 5. (Display the TI)	The PM or customer interface terminal should indicate the acceptance of the token. The PM or customer interface terminal should then display the loaded tariff index. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

4.1.50 CTSF47 – DDTK coded accepting non-PM-specific test 6 token

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of the InitiateMeterTest/Display token, test 6, while loaded with a DDTK.

Step	Instruction	Expected Result
1	Insert the following token For 11 digit DRN meters: 0000 0000 0006 7109 3248 For 13 digit DRN meters: 0115 2921 6421 8002 0378 Test token – Test number 6. (Test token reader device).	The PM or customer interface terminal should indicate the acceptance of the token if the manufacturer has indicated that test number 6 is supported. The PM or customer interface terminal should then perform a token reader device test. The PM or customer interface terminal shall reject the token if this test is not supported. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

4.1.51 CTSF48 – DDTK coded accepting non-PM-specific test 7 token

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of the InitiateMeterTest/Display token, test 7, while loaded with a DDTK.

Step	Instruction	Expected Result
1	<p>Insert the following token</p> <p>For 11 digit DRN meters:</p> <p>0000 0000 0012 0797 4400</p> <p>For 13 digit DRN meters:</p> <p>0115 2921 7796 1897 3828</p> <p>Initiate PM Test number 7 (Display maximum power limit).</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token if the manufacturer has indicated that test number 7 is supported. The PM or customer interface terminal should then display the maximum power limit.</p> <p>The PM or customer interface terminal shall reject the token if this test is not supported.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

4.1.52 CTSF49 – DDTK coded accepting non-PM-specific test 8 token

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of the InitiateMeterTest/Display token, test 8, while loaded with a DDTK.

Step	Instruction	Expected Result
1	<p>Insert the following token</p> <p>For 11 digit DRN meters:</p> <p>0000 0000 0022 8172 8512</p> <p>For 13 digit DRN meters:</p> <p>0115 2922 0544 9688 0824</p> <p>Test token – Test number 8. (Display tamper status).</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token if the manufacturer has indicated that test number 8 is supported. The PM or customer interface terminal should then display the tamper status.</p> <p>The PM or customer interface terminal shall reject the token if this test is not supported.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

4.1.53 CTSF50 – DDTK coded accepting non-PM-specific test 9 token

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of the InitiateMeterTest/Display token, test 9, while loaded with a DDTK.

Step	Instruction	Expected Result
1	<p>Insert the following token</p> <p>For 11 digit DRN meters:</p> <p>0000 0000 0044 2920 8064</p> <p>For 13 digit DRN meters:</p> <p>0115 2922 6042 5269 4700</p> <p>Test token – Test number 9. (Display power consumption).</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token if the manufacturer has indicated that test number 9 is supported. The PM or customer interface terminal should then display the power consumption.</p> <p>The PM or customer interface terminal shall reject the token if this test is not supported.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

4.1.54 CTSF51 – DDTK coded accepting non-PM-specific test 10 token

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of the InitiateMeterTest/Display token, test 10, while loaded with a DDTK.

Step	Instruction	Expected Result
1	<p>Insert the following token</p> <p>For 11 digit DRN meters:</p> <p>0000 0000 0087 2419 5840</p> <p>For 13 digit DRN meters:</p> <p>0115 2923 7037 6432 2536</p> <p>Test token – Test number 10. (Display software version).</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The PM or customer interface terminal should then display the software version.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

4.1.55 CTSF52 – DDTK coded accepting non-PM-specific test 11 token

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of the InitiateMeterTest/Display token, test 11, while loaded with a DDTK.

Step	Instruction	Expected Result
1	<p>Insert the following token</p> <p>For 11 digit DRN meters:</p> <p>0000 0000 0173 1410 5857</p> <p>For 13 digit DRN meters:</p> <p>0115 2925 9027 8757 7952</p> <p>Test token – Test number 11. (Display phase power unbalance limit).</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token if the manufacturer has indicated that test number 11 is supported. The PM or customer interface terminal should then display the phase power unbalance limit.</p> <p>The PM or customer interface terminal shall reject the token if this test is not supported.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

4.1.56 CTSF53 – DDTK coded accepting non-PM-specific test 12 (reserved) token

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of the InitiateMeterTest/Display token, test 12, while loaded with a DDTK.

Step	Instruction	Expected Result
1	<p>Insert the following token</p> <p>For 11 digit DRN meters:</p> <p>0000 0000 0344 9399 1426</p> <p>For 13 digit DRN meters:</p> <p>0115 2930 3008 3408 9776</p> <p>Test token – Test number 12. (Reserved – Display Water Meter factor).</p>	<p>The PM or customer interface terminal shall reject the token.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

4.1.57 CTSF54 – DDTK coded accepting non-PM-specific test 13 (reserved) token

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of the InitiateMeterTest/Display token, test 13, while loaded with a DDTK.

Step	Instruction	Expected Result
1	<p>Insert the following token</p> <p>For 11 digit DRN meters:</p> <p>0000 0000 0688 5369 7029</p> <p>For 13 digit DRN meters:</p> <p>0115 2939 0969 2711 2592</p> <p>Test token – Test number 13. (Reserved – Display tariff rate).</p>	<p>The PM or customer interface terminal shall reject the token.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

4.1.58 CTSF55 – DDTK coded accepting non-PM-specific STS tests 14 to 18 and reserved tokens

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of InitiateMeterTest/Display, tests 14 to 18 and reserved tokens while loaded with a DDTK.

Step	Instruction	Expected Result
1	<p>Insert the following token</p> <p>For 11 digit DRN meters:</p> <p>0000 0000 1375 7317 3770</p> <p>STS token in class 01₂ (Sub class = 0, Control field = 2000₁₆) – Display EA number</p> <p>For 13 digit DRN meters:</p> <p>0115 2956 6891 1315 4192</p> <p>STS token in class 01₂ (Sub class = 1, Control field = 2000₁₆) – Display EA number</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The PM or customer interface terminal should then display the supported EncryptionAlgorithm (EA) number.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
2	<p>Insert the following token</p> <p>For 11 digit DRN meters:</p> <p>0000 0000 2750 1212 7252</p> <p>STS token in class 01₂ (Sub class = 0, Control field = 4000₁₆) – Display number of keychange tokens supported (2 or 3)</p> <p>For 13 digit DRN meters:</p> <p>0115 2991 8734 8524 9680</p> <p>STS token in class 01₂ (Sub class = 1, Control field = 4000₁₆) – Display number of keychange tokens supported (2 or 3)</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The PM or customer interface terminal should then display the number of keychange tokens supported (2 or 3) .</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
3	<p>Insert the following token</p> <p>For 11 digit DRN meters:</p> <p>0000 0000 5498 9003 4216</p> <p>STS token in class 01₂ (Sub class = 0, Control field = 8000₁₆) – Display the SGC number</p> <p>For 13 digit DRN meters:</p> <p>0115 3062 2422 2942 8368</p> <p>STS token in class 01₂ (Sub class = 1, Control field = 8000₁₆) – Display the SGC number.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token if the manufacturer has indicated that the payment meter supports a 3 keychange token set. The PM or customer interface terminal should then display the SGC number.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

Step	Instruction	Expected Result
4	<p>Insert the following token</p> <p>For 11 digit DRN meters:</p> <p>0000 0001 0996 4584 8124</p> <p>STS token in class 01₂ (Sub class = 0, Control field = 10000₁₆) – Display KEN.</p> <p>For 13 digit DRN meters:</p> <p>0115 3202 9797 1778 8816</p> <p>STS token in class 01₂ (Sub class = 1, Control field = 10000₁₆) – Display the KEN.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The PM or customer interface terminal should then display the KEN.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
5	<p>Insert the following token</p> <p>For 11 digit DRN meters:</p> <p>0000 0002 1991 5747 5960</p> <p>STS token in class 01₂ (Sub class = 0, Control field = 20000₁₆) – Display the DRN.</p> <p>For 13 digit DRN meters:</p> <p>0115 3484 4546 9451 4832</p> <p>STS token in class 01₂ (Sub class = 1, Control field = 20000₁₆) – Display the DRN.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The PM or customer interface terminal should then display the DRN.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
6	<p>Insert the following token</p> <p>For 11 digit DRN meters:</p> <p>5779 0190 4181 3301 4705</p> <p>For 13 digit DRN meters:</p> <p>0345 8764 5096 6635 1492</p> <p>STS reserved token in class 01₂ (Sub class = 2, Control field = 1FFFFFFF₁₆) – Reserved sub class</p>	<p>The PM or customer interface terminal shall reject the token.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
7	<p>Insert the following token</p> <p>For 11 digit DRN meters:</p> <p>5894 3111 9227 3986 2049</p> <p>For 13 digit DRN meters:</p> <p>0461 1686 0142 7319 8868</p> <p>STS reserved token in class 01₂ (Sub class = 3, Control field = 1FFFFFFF₁₆) – Reserved sub class</p>	<p>The PM or customer interface terminal shall reject the token.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

Step	Instruction	Expected Result
8	<p>Insert the following token</p> <p>For 11 digit DRN meters:</p> <p>6009 6033 4273 4670 6705</p> <p>For 13 digit DRN meters:</p> <p>0576 4607 5188 8004 3044</p> <p>STS reserved token in class 01₂ (Sub class = 4, Control field = FFFFFFFF₁₆) – Reserved sub class</p>	<p>The PM or customer interface terminal shall reject the token.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
9	<p>Insert the following token</p> <p>For 11 digit DRN meters:</p> <p>6124 8954 9319 5355 4305</p> <p>For 13 digit DRN meters:</p> <p>0691 7529 0234 8689 0676</p> <p>STS reserved token in class 01₂ (Sub class = 5, Control field = FFFFFFFF₁₆) – Reserved sub class</p>	<p>The PM or customer interface terminal shall reject the token.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

4.1.59 CTSF56 – DDTK to DITK key change

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the DDTK to DITK key change.

Step	Instruction	Expected Result
1	<p>Insert the following token</p> <p>1458 5352 1557 3125 3419</p> <p>First token of Set PM Key token pair. DDTK₁ to DITK₁ key-change token. (KENHO = F, KRN = 1, RO = 0, Res = 0, KT = 0)</p>	<p>The meter shall reject this key change request with a TokenResult of Reject. . (if the token is rejected at this stage, do not continue with this test).</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
2	<p>Insert the following token.</p> <p>3001 0291 0233 3924 3312</p> <p>Second token of Set PM Key token pair. DDTK₁ to DITK₁ key-change token. (KENLO = F, TI = 01)</p>	<p>The PM or customer interface terminal shall reject the token.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

4.1.60 CTSF57 – DDTK to DCTK key change

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the DDTK to DCTK key change.

Step	Instruction	Expected Result
1	Insert the following token 4273 2095 6863 1304 9567 First token of Set PM Key token pair. DDTK ₁ to DCTK ₁ key-change token. (KENHO = F, KRN = 1, RO = 0, Res = 0, KT = 3)	The PM or customer interface terminal shall accept the token. Note that this token may be rejected if the meter rejects invalid keychanges on the first token
2	Insert the following token. 6761 0654 1429 2897 1276 Second token of Set PM Key token pair. DDTK ₁ to DCTK ₁ key-change token. (KENLO = F, TI = 01)	The PM or customer interface terminal shall reject the token if the PM is not of type TCT=01. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

Note: For tests CTSF58 to CTSF77, use UUT03.
 Power up UUT03 according to the manufacturers instructions. The PM or customer interface terminal should indicate that it is ready to accept a token. Token acceptance or rejection is as described by the manufacturer in Table1.

4.1.61 CTSF58 – DITK to DUTK key change

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the DITK to DUTK key change.

Step	Instruction	Expected Result
1	<p>Power up UUT03</p> <p>Insert the following token</p> <p>2020 4440 1442 9258 3562</p> <p>First token of Set PM Key token pair. DITK₀ to DUTK₀ key-change token. (KENHO = F, KRN = 1, RO = 0, Res = 0, KT = 2)</p>	<p>The PM or customer interface terminal shall indicate the acceptance of the first “Set PM key”.</p>
2	<p>Insert the following token</p> <p>4105 9084 7468 1430 1454</p> <p>Second token of Set PM Key token pair. DITK₀ to DUTK₀ key-change token. (KENLO = F, TI = 01)</p>	<p>The PM or customer interface terminal shall indicate the acceptance of the second “Set PM key” token.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

4.1.62 CTSF59 – DUTK to DUTK key change

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the DUTK to DUTK key change, with two invalid tokens entered.

Step	Instruction	Expected Result
1	<p>Insert the following token</p> <p>0646 7192 0068 0370 8424</p> <p>First token of Set PM Key token pair. DUTK₀ to DUTK₁ key-change token. (KENHO = F, KRN = 1, RO = 0, Res = 0, KT = 2)</p>	<p>The PM or customer interface terminal shall indicate the acceptance of the first “Set PM key” token.</p>
2	<p>Insert the following (invalid) token</p> <p>0541 7192 0068 0370 8424</p>	<p>The PM or customer interface terminal shall reject the token.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
3	<p>Insert the following (invalid) token</p> <p>0646 7192 0068 0380 8444</p>	<p>The PM or customer interface terminal shall reject the token.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

Step	Instruction	Expected Result
4	Insert the following token 2094 9545 2183 3587 0169 Second token of Set PM Key token pair. DUTK ₀ to DUTK ₁ key-change token. (KENLO = F, TI = 01)	The PM or customer interface terminal shall indicate the acceptance of the second "Set PM key" token. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
5	Insert the following token 6742 4745 6223 6510 7581 Third token of Set PM Key token triplet. DUTK ₁ to DUTK ₁ key-change token. (SGC = 234567)	<p>For a meter that supports a 3KCT set:</p> The PM or customer interface terminal shall indicate the acceptance of the third "Set PM key" token. After a period, the PM or customer interface terminal should indicate that it is ready to accept a token.
6	Insert the following token 4374 8221 3347 9894 4163 Second token of Set PM Key token triplet. DUTK ₁ to DUTK ₁ key-change token. (KENLO = F, TI = 01)	The PM or customer interface terminal shall indicate the acceptance of the second "Set PM key" token.
7	Insert the following token 0067 1101 3233 3548 9561 First token of Set PM Key token triplet. DUTK ₁ to DUTK ₁ key-change token. (KENHO = F, KRN = 1, RO = 0, Res = 1, KT = 2)	<p>For a meter that supports a 3KCT set:</p> the PM or customer interface terminal shall indicate the acceptance of the first "Set PM key" token.
8	Insert the following token For 11 digit DRN meters: 0000 0000 5498 9003 4216 For 13 digit DRN meters: 0115 3062 2422 2942 8368 Test token – Test number 16. (Display SGC).	The PM or customer interface terminal should indicate the acceptance of the token. The PM or customer interface terminal should then display the SGC value as 234567. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

4.1.63 CTSF60 – DUTK coded accepting credit token

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of a TransferCredit tokens while loaded with a DUTK.

For Electricity meters – do steps 1 to 6.

Step	Instruction	Expected Result
1	Insert the following token 1023 4928 5950 1961 0279 5 kilowatt-hour credit token encoded using DUTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 5 kilowatt-hours. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
2	Insert the following token. 5363 1666 1815 1382 6308 1638.4 kilowatt-hour credit token encoded using DUTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 1643.4 kilowatt-hours. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
3	Insert the following token. 4578 9434 3801 1840 2852 18022.4 kilowatt-hour credit token encoded using DUTK ₁ .	If 19665.8 kilowatt-hours is greater than the maximum amount of available credit that the meter can store as specified in Table 1 then the meter shall reject the token. Otherwise, the PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 19665.8 kilowatt-hours. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
4	Insert the following token. 4320 1095 0181 4347 0213 181862.4 kilowatt-hour credit token encoded using DUTK ₁ .	If 201528.2 kilowatt-hours is greater than the maximum amount of available credit that the meter can store as specified in Table 1 then the meter shall reject the token. Otherwise, the meter shall indicate the acceptance of the token as described by the manufacturer in Table 1. The available credit in the meter shall be 201528.2 kilowatt-hours. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
5	Insert the following token. 1023 4928 5950 1961 0279 5 kilowatt-hour credit token encoded using DUTK ₁ .	Record the available credit in the PM or customer interface terminal to ensure that this step does not alter the available credit in any way. The PM or customer interface terminal shall reject the token as “Used”. The available credit in the meter shall not change.
6	Insert the following token. 5363 1666 1815 1382 6308 1638.4 kilowatt-hour credit token encoded using DUTK ₁ .	Record the available credit in the PM or customer interface terminal to ensure that this step does not alter the available credit in any way. The PM or customer interface terminal shall reject the token as “Used”. The available credit in the meter shall not change.

For water meters – do steps 7 to 12.

Step	Instruction	Expected Result
7	<p>Insert the following token</p> <p>6734 3006 5844 4191 4557</p> <p>5 kl credit token encoded using DUTK₁.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 5 kl.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
8	<p>Insert the following token.</p> <p>6843 9260 2185 5059 5843</p> <p>1638.4 kl credit token encoded using DUTK₁.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 1643.4 kl.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
9	<p>Insert the following token.</p> <p>5739 5841 4737 5111 2352</p> <p>18022.4 kl credit token encoded using DUTK₁.</p>	<p>If 19665.8 kl is greater than the maximum amount of available credit that the meter can store as specified in Table 1 then the meter shall reject the token.</p> <p>Otherwise, the PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 19665.8 kl.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
10	<p>Insert the following token.</p> <p>0976 4207 3911 0638 7406</p> <p>181862.4 kl credit token encoded using DUTK₁.</p>	<p>If 201528.2 kl is greater than the maximum amount of available credit that the meter can store as specified in Table 1 then the meter shall reject the token.</p> <p>Otherwise, the meter shall indicate the acceptance of the token as described by the manufacturer in Table 1. The available credit in the meter shall be 201528.2 kl.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
11	<p>Insert the following token.</p> <p>6734 3006 5844 4191 4557</p> <p>5 kl credit token encoded using DUTK₁.</p>	<p>Record the available credit in the PM or customer interface terminal to ensure that this step does not alter the available credit in any way. The PM or customer interface terminal shall reject the token as "Used". The available credit in the meter shall not change.</p>
12	<p>Insert the following token.</p> <p>6843 9260 2185 5059 5843</p> <p>1638.4 kl credit token encoded using DUTK₁.</p>	<p>Record the available credit in the PM or customer interface terminal to ensure that this step does not alter the available credit in any way. The PM or customer interface terminal shall reject the token as "Used". The available credit in the meter shall not change.</p>

For gas meters – do steps 13 to 18.

Step	Instruction	Expected Result
13	<p>Insert the following token</p> <p>1926 3744 5978 4038 1376</p> <p>5 m³ credit token encoded using DUTK₁.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 5 m³.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
14	<p>Insert the following token.</p> <p>0878 4754 8529 3831 1045</p> <p>1638.4 m³ credit token encoded using DUTK₁.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 1643.4 m³.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
15	<p>Insert the following token.</p> <p>3486 9632 3983 0253 2124</p> <p>18022.4 m³ credit token encoded using DUTK₁.</p>	<p>If 19665.8 m³ is greater than the maximum amount of available credit that the meter can store as specified in Table 1 then the meter shall reject the token.</p> <p>Otherwise, the PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 19665.8 m³.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
16	<p>Insert the following token.</p> <p>2696 8535 8651 3600 9446</p> <p>181862.4 m³ credit token encoded using DUTK₁.</p>	<p>If 201528.2 m³ is greater than the maximum amount of available credit that the meter can store as specified in Table 1 then the meter shall reject the token.</p> <p>Otherwise, the meter shall indicate the acceptance of the token as described by the manufacturer in Table 1. The available credit in the meter shall be 201528.2 m³.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
17	<p>Insert the following token</p> <p>1926 3744 5978 4038 1376</p> <p>5 m³ credit token encoded using DUTK₁.</p>	<p>Record the available credit in the PM or customer interface terminal to ensure that this step does not alter the available credit in any way. The PM or customer interface terminal shall reject the token as "Used". The available credit in the meter shall not change.</p>
18	<p>Insert the following token.</p> <p>0878 4754 8529 3831 1045</p> <p>1638.4 m³ credit token encoded using DUTK₁.</p>	<p>Record the available credit in the PM or customer interface terminal to ensure that this step does not alter the available credit in any way. The PM or customer interface terminal shall reject the token as "Used". The available credit in the meter shall not change.</p>

For time meters – do steps 19 to 24.

Step	Instruction	Expected Result
19	<p>Insert the following token</p> <p>6892 6857 8989 1618 1433</p> <p>5 min credit token encoded using DUTK₁.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 5 min.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
20	<p>Insert the following token.</p> <p>6582 8168 6582 3122 9859</p> <p>1638 min credit token encoded using DUTK₁.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 1643 min.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
21	<p>Insert the following token.</p> <p>4916 2401 6356 0297 3125</p> <p>18022 min credit token encoded using DUTK₁.</p>	<p>If 19665 min is greater than the maximum amount of available credit that the meter can store as specified in Table 1 then the meter shall reject the token.</p> <p>Otherwise, the PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 19665 min.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
22	<p>Insert the following token.</p> <p>4600 2771 6157 1754 5757</p> <p>181862 min credit token encoded using DUTK₁.</p>	<p>If 201528 min is greater than the maximum amount of available credit that the meter can store as specified in Table 1 then the meter shall reject the token.</p> <p>Otherwise, the meter shall indicate the acceptance of the token as described by the manufacturer in Table 1. The available credit in the meter shall be 201528 min.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
23	<p>Insert the following token</p> <p>6892 6857 8989 1618 1433</p> <p>5 min credit token encoded using DUTK₁.</p>	<p>Record the available credit in the PM or customer interface terminal to ensure that this step does not alter the available credit in any way. The PM or customer interface terminal shall reject the token as "Used". The available credit in the meter shall not change.</p>
24	<p>Insert the following token.</p> <p>6582 8168 6582 3122 9859</p> <p>1638 min credit token encoded using DUTK₁.</p>	<p>Record the available credit in the PM or customer interface terminal to ensure that this step does not alter the available credit in any way. The PM or customer interface terminal shall reject the token as "Used". The available credit in the meter shall not change.</p>

For electricity currency meters – do steps 25 to 30.

Step	Instruction	Expected Result
25	<p>Insert the following token</p> <p>6288 2525 5269 8767 2649</p> <p>5000 unit credit token encoded using DUTK₁.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 5000 units.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
26	<p>Insert the following token.</p> <p>4976 6004 9351 3265 3626</p> <p>16384 unit credit token encoded using DUTK₁.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 21384 units.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
27	<p>Insert the following token.</p> <p>0780 9461 2777 0794 8826</p> <p>180224 unit credit token encoded using DUTK₁.</p>	<p>If 201608 units is greater than the maximum amount of available credit that the meter can store as specified in Table 1 then the meter shall reject the token.</p> <p>Otherwise, the PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 201608 units.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
28	<p>Insert the following token.</p> <p>4501 4000 3053 0955 2207</p> <p>1818624 units credit token encoded using DUTK₁.</p>	<p>If 2020232 units is greater than the maximum amount of available credit that the meter can store as specified in Table 1 then the meter shall reject the token.</p> <p>Otherwise, the meter shall indicate the acceptance of the token as described by the manufacturer in Table 1. The available credit in the meter shall be 2020232 units.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
29	<p>Insert the following token</p> <p>6288 2525 5269 8767 2649</p> <p>5000 units credit token encoded using DUTK₁.</p>	<p>Record the available credit in the PM or customer interface terminal to ensure that this step does not alter the available credit in any way. The PM or customer interface terminal shall reject the token as "Used". The available credit in the meter shall not change.</p>
30	<p>Insert the following token.</p> <p>4976 6004 9351 3265 3626</p> <p>16384 units credit token encoded using DUTK₁.</p>	<p>Record the available credit in the PM or customer interface terminal to ensure that this step does not alter the available credit in any way. The PM or customer interface terminal shall reject the token as "Used". The available credit in the meter shall not change.</p>

For water currency meters – do steps 31 to 36.

Step	Instruction	Expected Result
31	<p>Insert the following token</p> <p>6540 8132 7435 4982 5733</p> <p>5000 unit credit token encoded using DUTK₁.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 5000 units.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
32	<p>Insert the following token.</p> <p>2125 3401 9856 6041 6345</p> <p>16384 unit credit token encoded using DUTK₁.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 21384 units.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
33	<p>Insert the following token.</p> <p>1677 1767 2032 8416 0689</p> <p>180224 unit credit token encoded using DUTK₁.</p>	<p>If 201608 units is greater than the maximum amount of available credit that the meter can store as specified in Table 1 then the meter shall reject the token.</p> <p>Otherwise, the PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 201608 units.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
34	<p>Insert the following token.</p> <p>2309 3682 4182 3841 2397</p> <p>1818624 units credit token encoded using DUTK₁.</p>	<p>If 2020232 units is greater than the maximum amount of available credit that the meter can store as specified in Table 1 then the meter shall reject the token.</p> <p>Otherwise, the meter shall indicate the acceptance of the token as described by the manufacturer in Table 1. The available credit in the meter shall be 2020232 units.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
35	<p>Insert the following token</p> <p>6540 8132 7435 4982 5733</p> <p>5000 units credit token encoded using DUTK₁.</p>	<p>Record the available credit in the PM or customer interface terminal to ensure that this step does not alter the available credit in any way. The PM or customer interface terminal shall reject the token as “Used”. The available credit in the meter shall not change.</p>
36	<p>Insert the following token.</p> <p>2125 3401 9856 6041 6345</p> <p>16384 units credit token encoded using DUTK₁.</p>	<p>Record the available credit in the PM or customer interface terminal to ensure that this step does not alter the available credit in any way. The PM or customer interface terminal shall reject the token as “Used”. The available credit in the meter shall not change.</p>

For gas currency meters – do steps 37 to 42.

Step	Instruction	Expected Result
37	Insert the following token 3429 3840 5554 2885 0711 5000 unit credit token encoded using DUTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 5000 units. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
38	Insert the following token. 6100 0748 6343 3186 2081 16384 unit credit token encoded using DUTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 21384 units. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
39	Insert the following token. 6212 8251 9201 0557 5327 180224 unit credit token encoded using DUTK ₁ .	If 201608 units is greater than the maximum amount of available credit that the meter can store as specified in Table 1 then the meter shall reject the token. Otherwise, the PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 201608 units. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
40	Insert the following token. 5331 4691 8907 9260 4198 1818624 units credit token encoded using DUTK ₁ .	If 2020232 units is greater than the maximum amount of available credit that the meter can store as specified in Table 1 then the meter shall reject the token. Otherwise, the meter shall indicate the acceptance of the token as described by the manufacturer in Table 1. The available credit in the meter shall be 2020232 units. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
41	Insert the following token 3429 3840 5554 2885 0711 5000 units credit token encoded using DUTK ₁ .	Record the available credit in the PM or customer interface terminal to ensure that this step does not alter the available credit in any way. The PM or customer interface terminal shall reject the token as "Used". The available credit in the meter shall not change.
42	Insert the following token. 6100 0748 6343 3186 2081 16384 units credit token encoded using DUTK ₁ .	Record the available credit in the PM or customer interface terminal to ensure that this step does not alter the available credit in any way. The PM or customer interface terminal shall reject the token as "Used". The available credit in the meter shall not change.

For time currency meters – do steps 43 to 48.

Step	Instruction	Expected Result
43	<p>Insert the following token</p> <p>7315 5725 4056 0166 6354</p> <p>5000 unit credit token encoded using DUTK₁.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 5000 units.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
44	<p>Insert the following token.</p> <p>3271 8211 8227 6034 6688</p> <p>16384 unit credit token encoded using DUTK₁.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 21384 units.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
45	<p>Insert the following token.</p> <p>4305 4987 0865 8550 7999</p> <p>180224 unit credit token encoded using DUTK₁.</p>	<p>If 201608 units is greater than the maximum amount of available credit that the meter can store as specified in Table 1 then the meter shall reject the token.</p> <p>Otherwise, the PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 201608 units.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
46	<p>Insert the following token.</p> <p>0203 6593 1566 7242 3153</p> <p>1818624 units credit token encoded using DUTK₁.</p>	<p>If 2020232 units is greater than the maximum amount of available credit that the meter can store as specified in Table 1 then the meter shall reject the token.</p> <p>Otherwise, the meter shall indicate the acceptance of the token as described by the manufacturer in Table 1. The available credit in the meter shall be 2020232 units.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
47	<p>Insert the following token</p> <p>7315 5725 4056 0166 6354</p> <p>5000 units credit token encoded using DUTK₁.</p>	<p>Record the available credit in the PM or customer interface terminal to ensure that this step does not alter the available credit in any way. The PM or customer interface terminal shall reject the token as "Used". The available credit in the meter shall not change.</p>
48	<p>Insert the following token.</p> <p>3271 8211 8227 6034 6688</p> <p>16384 units credit token encoded using DUTK₁.</p>	<p>Record the available credit in the PM or customer interface terminal to ensure that this step does not alter the available credit in any way. The PM or customer interface terminal shall reject the token as "Used". The available credit in the meter shall not change.</p>

4.1.64 CTSF61 – DUTK coded accepting maximum power limit token

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of a SetMaximumPowerLimit token while loaded with a DUTK.

Note: this test only required for electricity meters that support this feature.

Step	Instruction	Expected Result
1	<p>If the manufacturer's response in Table 1 indicates that initiate test number 7 is supported, insert token</p> <p>For 11 digit DRN meters: 0000 0000 0012 0797 4400</p> <p>For 13 digit DRN meters: 0115 2921 7796 1897 3828</p> <p>Initiate PM Test number 7 (Display maximum power limit), otherwise, skip this step.</p>	The PM or customer interface terminal shall display the maximum power limit.
2	<p>Insert the following token 2799 8942 2914 0324 9832</p> <p>2.3 kilowatt Set maximum power limit token encoded using DUTK₁.</p>	The PM or customer interface terminal shall indicate acceptance of the token.
3	<p>If the manufacturer's response in Table 1 indicates that initiate test number 7 is supported, insert token</p> <p>For 11 digit DRN meters: 0000 0000 0012 0797 4400</p> <p>For 13 digit DRN meters: 0115 2921 7796 1897 3828</p> <p>Initiate PM Test number 7 (Display maximum power limit), otherwise, skip this step.</p>	The PM or customer interface terminal shall display the maximum power limit of 2.3 kilowatts.
4	<p>Insert the following token 4282 8272 2292 4223 8363</p> <p>1 kilowatt Set maximum power limit token encoded using DUTK₁.</p>	The PM or customer interface terminal shall indicate acceptance of the token.

Step	Instruction	Expected Result
5	<p>If the manufacturer's response in Table 1 indicates that initiate test number 7 is supported, insert token</p> <p>For 11 digit DRN meters:</p> <p>0000 0000 0012 0797 4400</p> <p>For 13 digit DRN meters:</p> <p>0115 2921 7796 1897 3828</p> <p>Initiate PM Test number 7 (Display maximum power limit), otherwise, skip this step.</p>	<p>The PM or customer interface terminal shall display the maximum power limit of 1.0 kilowatts.</p>

4.1.65 CTSF62 – DUTK coded accepting clear PM electricity credit

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of ClearCredit token while loaded with a DUTK and explicitly nominating the electricity register in the PM.

Note: this test only required for electricity meters.

Step	Instruction	Expected Result
1	<p>Insert the following token</p> <p>2280 8566 8932 8700 7677</p> <p>Clear electricity credit token encoded using the DUTK₁.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 0 kilowatt-hours.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

4.1.66 CTSF63 – DUTK coded accepting clear PM water credit

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of ClearCredit token while loaded with a DUTK and explicitly nominating the water register in the PM.

Note: this test only required for water meters.

Step	Instruction	Expected Result
1	<p>Insert the following token</p> <p>5827 4888 1999 3720 6554</p> <p>Clear water credit token encoded using the DUTK₁.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 0 kl.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

4.1.67 CTSF64 – DUTK coded accepting clear PM gas credit

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of ClearCredit token while loaded with a DUTK and explicitly nominating the gas register in the PM.

Note: this test only required for gas meters.

Step	Instruction	Expected Result
1	Insert the following token 6143 5393 8972 1711 2128 Clear gas credit token encoded using the DUTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 0 m ³ . After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

4.1.68 CTSF65 – DUTK coded accepting clear PM connection time credit

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of ClearCredit token while loaded with a DUTK and explicitly nominating the connection time register in the PM.

Note: this test only required for time meters.

Step	Instruction	Expected Result
1	Insert the following token 1914 0850 4907 2382 1725 Clear connection time credit token encoded using the DUTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 0 min. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

4.1.69 CTSF66 – DUTK coded accepting clear PM currency credit

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of ClearCredit token while loaded with a DUTK and explicitly nominating the connection time register in the PM.

Note: this test only required for currency based meters.

Do only tests steps for the currency type supported by the PM.

Step	Instruction	Expected Result
1	Insert the following token For electricity currency 0610 9632 4940 1781 9179 Clear electricity currency credit token encoded using the DUTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 0 currency units. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

Step	Instruction	Expected Result
2	Insert the following token For water currency 5322 0141 6756 5845 4405 Clear water currency credit token encoded using the DUTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 0 currency units. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
3	Insert the following token For gas currency 5756 5626 2519 0437 4927 Clear gas currency credit token encoded using the DUTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 0 currency units. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
4	Insert the following token For time currency 1090 3946 9503 6700 5418 Clear time currency credit token encoded using the DUTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 0 currency units. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

4.1.70 CTSF67 – DUTK coded accepting clear PM all credit registers

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of the ClearCredit token while loaded with a DUTK and explicitly nominating all registers in the PM.

Step	Instruction	Expected Result
1	Insert the following token 5956 1336 9230 8843 5145 Clear all credit registers token encoded using the DUTK ₁	The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 0 kilowatt-hours. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

4.1.71 CTSF68 – DUTK coded accepting clear PM reserved credit registers

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of the ClearCredit token while loaded with a DUTK and explicitly nominating reserved registers.

Step	Instruction	Expected Result
1	Insert the following token 7364 2418 1150 8258 5994 Clear credit register number 8 token encoded using the DUTK ₁	The PM or customer interface terminal shall reject the token.

Step	Instruction	Expected Result
2	<p>Insert the following token</p> <p>5845 1699 0885 0102 1321</p> <p>Clear credit register number FFFE₁₆ token encoded using the DUTK₁</p>	<p>The PM or customer interface terminal shall reject the token.</p>

4.1.72 CTSF69 – DUTK coded processing set PM key with roll over

Overview: This test verifies the MeterApplicationProcess for compliance with respect to a DUTK key change with the roll over flag set.

Step	Instruction	Expected Result
1	<p>Insert the following token</p> <p>2095 9694 7147 0572 1757</p> <p>First token of Set PM Key token pair. DUTK₁ to DUTK₂ key-change token. (KENHO = F, KRN = 1, RO = 0, Res = 0, KT = 2)</p>	<p>The PM or customer interface terminal shall indicate the acceptance of the first "Set PM key" token.</p>
2	<p>Insert the following token</p> <p>2063 2706 7522 4131 5994</p> <p>Second token of Set PM Key token pair. DUTK₁ to DUTK₂ key-change token. (KENLO = F, TI = 01)</p>	<p>The PM or customer interface terminal shall indicate the acceptance of the second "Set PM key" token.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
3	<p>Insert the following token</p> <p>0977 2953 7175 2354 9607</p> <p>First token of Set PM Key token pair. DUTK₂ to DUTK₁ key-change token. (KENHO = F, KRN = 1, RO = 1, Res = 0, KT = 2)</p>	<p>The PM or customer interface terminal shall indicate the acceptance of the first "Set PM key" token.</p>
4	<p>Insert the following token</p> <p>5301 1771 7223 2836 6493</p> <p>Second token of Set PM Key token pair. DUTK₂ to DUTK₁ key-change token. (KENLO = F, TI = 01)</p>	<p>The PM or customer interface terminal shall indicate the acceptance of the second "Set PM key" token.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
5	<p>Insert the following token</p> <p>2635 0104 1918 2604 0746</p> <p>Clear all credit registers token encoded using the DUTK₁.</p> <p>TID value greater than Step 6 TID.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 0.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

Step	Instruction	Expected Result
6	<p>Insert the following token</p> <p>2404 5934 6345 2567 5282</p> <p>Clear all credit registers token encoded using the DUTK₁.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The available credit in the meter shall be 0.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
7	<p>Insert the following token.</p> <p>For 11 digit DRN meters:</p> <p>5649 3153 7254 5031 3471</p> <p>For 13 digit DRN meters:</p> <p>0230 5843 0050 5295 1967</p> <p>Test token – Test number 0.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The PM or customer interface terminal should then perform the following tests:</p> <ol style="list-style-type: none"> 1. Test the load switch. If the manufacturers response in Table1 is that the load switch test is not supported, then the load switch should not be tested and this step may be skipped. 2. Test the meter information display services. 3. Display the cumulative consumption register totals. 4. Display 1 for the KRN. 5. Display the Tariff Index 6. If the response in Table 1 indicates that test number 6 token is supported, test the token reader device. 7. If the response in Table 1 indicates that test number 7 token is supported, display the maximum power limit. 8. If the response in Table 1 indicates that test number 8 token is supported, display the tamper status. 9. If the response in Table 1 indicates that test number 9 token is supported, display the power consumption. 10. Display the software version. 11. If the response in Table 1 indicates that test number 11 token is supported, display the phase power unbalance limit. 12. Reserved 13. Reserved 14. Display the EA value 15. Display the number of keychange tokens supported 16. If the response in Table 1 indicates that test number 16 token is supported, display the SGC value 17. Display the KEN value 18. Display the DRN <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

4.1.73 CTSF70 – DUTK coded processing clear tamper condition

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of the ClearTamperCondition token while loaded with a DUTK.

Step	Instruction	Expected Result
1	Place the meter in a tamper state following the manufacturer's instructions as described in Table 1.	The PM or customer interface terminal should indicate that it is in a tamper state if this feature is supported.
2	Insert the following token: 0067 8500 7837 1741 2164 Clear tamper condition encoded using DUTK ₁ .	If the manufacturer's response in Table 1 indicates that the submitted meter has a tamper detect capability, and it is activated, the PM or customer interface terminal should indicate the acceptance of the token. Note that this token may be accepted even if the tamper detect capability is disabled. If the manufacturer's response in Table 1 indicates that the meter does not support tamper, the PM or customer interface terminal shall reject the token After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
3	Insert the following token. For 11 digit DRN meters: 5649 3153 7254 5031 3471 For 13 digit DRN meters: 0230 5843 0050 5295 1967 Test token – Test number 0.	The PM or customer interface terminal should indicate the acceptance of the token. The PM or customer interface terminal should then perform the following tests: <ol style="list-style-type: none"> 1. Test the load switch. If the manufacturer's response in Table 1 is that the load switch test is not supported, then the load switch should not be tested and this step may be skipped. 2. Test the meter information display services. 3. Display the cumulative consumption register totals. 4. Display 1 for the key revision number. 5. Display the Tariff Index 6. If the response in Table 1 indicates that test number 6 token is supported, test the token reader device. 7. If the response in Table 1 indicates that test number 7 token is supported, display the maximum power limit. 8. If the response in Table 1 indicates that test number 8 token is supported, display the tamper status as clear. 9. If the response in Table 1 indicates that test number 9 token is supported, display the power consumption. 10. Display the software version. 11. If the response in Table 1 indicates that test number 11 token is supported, display the phase power unbalance limit. 12. Reserved 13. Reserved 14. Display the EA value 15. Display the number of keychange tokens supported 16. If the response in Table 1 indicates that test number 16 token is supported, display the SGC value 17. Display the KEN value 18. Display the DRN After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

4.1.74 CTSF71 – DUTK coded processing set phase unbalance limit

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of the SetMaximumPhasePowerUnbalanceLimit token while loaded with a DUTK.

Note: this test only required for electricity meters.

Step	Instruction	Expected Result
1	<p>If the manufacturer's response in Table 1 indicates that the meter is a poly-phase meter, insert token</p> <p>3458 5158 6138 7242 8514</p> <p>set maximum phase power unbalance limit token encoded using DUTK₁. (MPPUL = 1 kilowatt), otherwise, skip this step.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
2	<p>Insert the following token.</p> <p>For 11 digit DRN meters:</p> <p>5649 3153 7254 5031 3471</p> <p>For 13 digit DRN meters:</p> <p>0230 5843 0050 5295 1967</p> <p>Test token – Test number 0.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token. The PM or customer interface terminal should then perform the following tests:</p> <ol style="list-style-type: none"> 1. Test the load switch. If the manufacturers response in Table1 is that the load switch test is not supported, then the load switch should not be tested and this step may be skipped. 2. Test the meter information display services. 3. Display the cumulative consumption register totals. 4. Display 1 for the key revision number. 5. Display the Tariff Index. 6. If the response in Table 1 indicates that test number 6 token is supported, test the token reader device. 7. If the response in Table 1 indicates that test number 7 token is supported, display the maximum power limit. 8. If the response in Table 1 indicates that test number 8 token is supported, display the tamper status as clear. 9. If the response in Table 1 indicates that test number 9 token is supported, display the power consumption. 10. Display the software version. 11. If the response in Table 1 indicates that test number 11 token is supported, display the phase power unbalance limit as 1 kilowatt. 12. Reserved 13. Reserved 14. Display the EA value 15. Display the number of keychange tokens supported 16. If the response in Table 1 indicates that test number 16 token is supported, display the SGC value 17. Display the KEN value 18. Display the DRN <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

4.1.75 CTSF72 – DUTK coded Class 2 token

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of Class 2 tokens while loaded with a DUTK.

Step	Instruction	Expected Result
1	<p>Insert the following token</p> <p>5282 2262 4100 9503 8206</p> <p>STS reserved token in class 10₂ encoded using DUTK₁. (Sub class = 11)</p>	<p>The PM or customer interface terminal shall reject the token. Note that a payment meter may accept this token if proprietary tokens have been implemented, but in this case, this shall not form part of the test.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
2	<p>Insert the following token</p> <p>6091 8712 4066 4018 9819</p> <p>DUTK₁ coded Class2 SubClass10 token. (Index = 63, FlagIndex = 0, FlagValue = 0)</p>	<p>If the manufacturer has stated in Table 1 that the payment meter supports Class2 SubClass10 SetFlag tokens as specified in STS202-5, the PM or customer interface terminal shall accept the token.</p> <p>Otherwise, the payment meter shall reject the token and Steps 3-5 may be omitted.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
3	<p>Read the flag 0</p> <p>0344 0750 1154 4527 9822</p>	<p>The PM shall indicate a value of 0 for the flag value.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
4	<p>Insert the following token</p> <p>0845 2871 3814 3730 9605</p> <p>DUTK₁ coded Class2 SubClass10 token. (Index = 63, FlagIndex = 0, FlagValue = 1)</p>	<p>The PM or customer interface terminal shall accept the token.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
5	<p>Read the flag 0</p> <p>0344 0750 1154 4527 9822</p>	<p>The PM shall indicate a value of 1 for the flag value.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
6	<p>Insert the following token</p> <p>0945 2824 6918 1518 0295</p> <p>DUTK₁ coded Class2 SubClass10 token. (Index = 0, ControlValue = 0)</p>	<p>If the manufacturer has stated in Table 1 that the payment meter supports Class2 SubClass10 SetControlValue tokens as specified in STS202-5, the PM or customer interface terminal shall accept the token.</p> <p>Otherwise, the payment meter shall reject the token and Steps 7-9 may be omitted</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
7	<p>Read the control value</p> <p>0230 5843 0093 4791 4912</p>	<p>The PM shall indicate a value of 0 for the control value.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

Step	Instruction	Expected Result
8	Insert the following token 1759 4949 1866 8477 4933 DUTK ₁ coded Class2 SubClass10 token. (Index = 0, ControlValue = 0123)	The PM or customer interface terminal shall accept the token. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.
9	Read the control value 0230 5843 0093 4791 4912	The PM shall indicate a value of 0123 for the control value. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

4.1.76 CTSF73 – DUTK coded class 3 STS reserved token

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the processing of Class 3 reserved tokens while loaded with a DUTK.

Step	Instruction	Expected Result
1	Insert the following token 6444 0635 4953 8193 1806 STS reserved token in class 11 ₂ encoded using DUTK ₁ . (Sub class = 0)	The PM or customer interface terminal shall reject the token. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

4.1.77 CTSF74 – DUTK coded non-volatile memory TID store

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the non-volatile memory TID store and that the PM can store at least 50 TIDs while loaded with a DUTK.

Do Steps 1 to 5 for electricity meters.

Step	Instruction	Expected Result
1	Insert the following token 6272 2483 0939 5449 3936 Clear electricity credit token encoded using the DUTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token as described by the manufacturer in Table1. The available credit in the meter shall be 0 kilowatt-hours. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token as described by the manufacturer in Table1.
2	Examine the maximum number of TID's specified by the manufacturer in Table1	The value shall be greater than or equal to 50. If not, the test fails.

Step	Instruction	Expected Result
3	<p>Insert the following 1 kWh credit tokens encoded using DUTK₁.</p> <p>5329 5470 6950 9553 6091 3324 9003 5500 1596 7313 2043 7516 9999 3001 7220 6168 7286 7064 7825 4289 5100 8240 8758 1944 6152</p> <p>4175 3254 8104 1062 4336 0508 9258 9359 6119 5190 0064 3561 4848 8453 9347 1336 4305 6254 5045 2622 7284 2691 4997 9443 0997</p> <p>0029 9733 2628 6402 8219 2294 3682 8473 3224 5173 5895 2398 4379 7836 7952 5714 3277 7849 1806 6640 0089 0738 1676 1789 8012</p> <p>3894 0366 4353 2505 1026 5171 6061 1805 2427 3336 2180 7670 0663 7509 6830 3452 7167 5271 2294 6682 6936 8416 1202 3043 8101</p> <p>0754 3268 9607 5835 8444 5313 1155 1430 2173 9433 1983 2332 7110 9182 5109 1030 9583 2483 7822 6719 1373 5154 0735 8934 4876</p> <p>2410 7518 6616 3004 4202 0881 1725 0298 2488 8993 3651 9823 6358 2932 4070 0684 2815 2058 0475 2231 1264 0466 1665 8334 5265</p> <p>6811 9771 4709 3865 0529 0069 5894 3139 0755 4629 3457 2532 7315 3093 9902 3021 5349 8165 0082 6797 4287 3191 5711 7616 0552</p> <p>6785 6772 4858 2327 3809 0053 0207 2800 1785 3637 3276 5718 2863 1991 4503 2029 4591 6042 1600 6308 4250 5822 7359 6599 9347</p> <p>3460 6446 6469 8703 6679 5408 0241 5659 8553 8420 2022 7345 6297 6160 4669 0622 7187 1976 7499 3682 4671 1491 4518 2049 5693</p> <p>0990 4152 9320 8300 4858 3062 5264 9521 6135 4437 7108 3719 2837 8555 2494 2024 3086 8315 4180 8687 1758 2709 0960 0133 3097</p> <p>0887 0944 3153 7289 4767 6239 4746 9248 4411 4946 6526 3841 3636 1384 2260 4070 1781 6031 4550 1539 5513 0832 5343 2355 9684</p> <p>3283 9493 6879 3162 5168 1392 8778 9635 2541 2731 5295 6604 8739 1200 8932 1316 5822 6555 5632 9688 2951 1280 3138 4646 8447</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token as described by the manufacturer in Table1. The available credit in the meter shall be incremented by 1 kilowatt-hour after acceptance of each token.</p> <p>The meter credit should read 5kWh</p> <p>The meter credit should read 10kWh</p> <p>The meter credit should read 15kWh</p> <p>The meter credit should read 20kWh</p> <p>The meter credit should read 25kWh</p> <p>The meter credit should read 30kWh</p> <p>The meter credit should read 35kWh</p> <p>The meter credit should read 40kWh</p> <p>The meter credit should read 45kWh</p> <p>The meter credit should read 50kWh</p> <p>The meter credit should read 55kWh</p> <p>The meter credit should read 60kWh</p>

Step	Instruction	Expected Result
4	<p>Insert the following token</p> <p>3324 9003 5500 1596 7313</p> <p>1 kilowatt-hour credit token encoded using DUTK₁.</p>	<p>If the value specified by the manufacturer in Table1 is less than or equal 60 then the PM or customer interface terminal shall reject the token as "Old" as described by the manufacturer in Table1.</p> <p>If the value specified by the manufacturer in Table1 is greater than 60 then the PM or customer interface terminal shall reject the token as "Duplicate" as described by the manufacturer in Table1.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token as described by the manufacturer in Table1.</p>
5	<p>Insert the following token</p> <p>5714 3277 7849 1806 6640</p> <p>1 kilowatt-hour credit token encoded using DUTK₁.</p>	<p>The PM or customer interface terminal shall reject the token as "Duplicate", as described by the manufacturer in Table1.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token as described by the manufacturer in Table1.</p>

Do Steps 6 to 10 for water meters.

Step	Instruction	Expected Result
6	<p>Insert the following token</p> <p>1449 1233 8632 3917 8854</p> <p>Clear water credit token encoded using the DUTK₁.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token as described by the manufacturer in Table1. The available credit in the meter shall be 0 kl.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token as described by the manufacturer in Table1.</p>
7	<p>Examine the maximum number of TID's specified by the manufacturer in Table1</p>	<p>The value shall be greater than or equal to 50. If not, the test fails.</p>

Step	Instruction	Expected Result
8	<p>Insert the following 1 kl credit tokens encoded using DUTK₁.</p> <p>5085 3855 9253 4926 0560 2252 3457 3501 9311 2825 7110 0264 6181 6575 2747 3585 0386 6931 7188 5046 0008 9575 6866 1408 4564</p> <p>1930 4588 0069 3667 8604 7369 7192 7544 5255 0511 2857 5919 1840 7881 2644 6037 9997 8968 8160 0383 4935 0475 0392 5902 0516</p> <p>4820 4631 8394 3873 6338 3720 1239 8721 3612 6947 6991 0186 2149 7236 1513 2999 0221 0011 7142 1793 4083 0005 0847 3083 0820</p> <p>6754 2515 1645 3311 1110 1238 5462 1185 8225 5789 3449 3834 9302 4938 1550 6675 7143 0207 0917 4619 4077 8917 0070 8853 7198</p> <p>5568 3853 4736 0112 5669 1131 8357 0438 5656 5119 5937 5354 9970 4320 8136 0735 7342 7460 5732 4746 5514 1134 0149 5998 9117</p> <p>2432 6227 2933 7992 2134 0495 8177 5530 1328 3768 5532 2773 5495 4102 3400 4881 4076 0115 5186 7807 4168 0210 1238 5547 3683</p> <p>2664 7327 5554 4019 2306 5333 9977 1949 3513 1640 6212 7206 9759 9498 0620 1453 5673 4412 9415 1278 1840 5419 4076 5061 1070</p> <p>4776 9133 0905 6282 9883 6718 2820 7282 6901 5005 0060 6228 3010 1294 6863 0625 5293 8427 5822 8488 5790 7048 4143 0637 0786</p> <p>3399 9982 6602 7071 0659 2351 8875 0934 2843 8812 1023 6438 4037 3004 6288 6421 6556 5838 5010 5960 4043 4249 6633 3123 4662</p> <p>1551 9745 7498 3448 1378 2878 6280 4304 8260 3815 2615 1367 0348 5583 1719 0880 9659 5778 3714 9914 2798 0737 9680 5517 3490</p> <p>3074 5560 4169 6388 6559 5233 0603 6033 3562 4767 5948 8337 8644 7493 5303 0148 4259 7905 3015 6895 0529 4736 3405 0398 1614</p> <p>1060 1548 1694 3077 1330 4676 6961 5418 6812 8433 1190 6311 0444 7367 6514 5291 7080 4121 7442 9009 1023 7468 7057 5744 4097</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token as described by the manufacturer in Table1. The available credit in the meter shall be incremented by 1 kl after acceptance of each token.</p> <p>The meter credit should read 5kl</p> <p>The meter credit should read 10kl</p> <p>The meter credit should read 15kl</p> <p>The meter credit should read 20kl</p> <p>The meter credit should read 25kl</p> <p>The meter credit should read 30kl</p> <p>The meter credit should read 35kl</p> <p>The meter credit should read 40kl</p> <p>The meter credit should read 45kl</p> <p>The meter credit should read 50kl</p> <p>The meter credit should read 55kl</p> <p>The meter credit should read 60kl</p>

Step	Instruction	Expected Result
9	<p>Insert the following token</p> <p>2252 3457 3501 9311 2825</p> <p>1 kl credit token encoded using DUTK₁.</p>	<p>If the value specified by the manufacturer in Table1 is less than or equal 60 then the PM or customer interface terminal shall reject the token as "Old" as described by the manufacturer in Table1.</p> <p>If the value specified by the manufacturer in Table1 is greater than 60 then the PM or customer interface terminal shall reject the token as "Duplicate" as described by the manufacturer in Table1.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token as described by the manufacturer in Table1.</p>
10	<p>Insert the following token</p> <p>2999 0221 0011 7142 1793</p> <p>1 kl credit token encoded using DUTK₁.</p>	<p>The PM or customer interface terminal shall reject the token as "Duplicate", as described by the manufacturer in Table1.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token as described by the manufacturer in Table1.</p>

Do Steps 11 to 15 for Gas meters.

Step	Instruction	Expected Result
11	<p>Insert the following token</p> <p>4281 2095 4775 2157 1909</p> <p>Clear Gas credit token encoded using the DUTK₁.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token as described by the manufacturer in Table1. The available credit in the meter shall be 0 m³.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token as described by the manufacturer in Table1.</p>
12	<p>Examine the maximum number of TID's specified by the manufacturer in Table1</p>	<p>The value shall be greater than or equal to 50. If not, the test fails.</p>

Step	Instruction	Expected Result
13	<p>Insert the following 1 m3 credit tokens encoded using DUTK1.</p> <p>3341 0300 6978 0268 4296 2771 8059 0121 1816 4804 6666 4855 2062 3926 4833 2489 3204 3187 3844 6646 4309 9480 9313 1891 3698</p> <p>4122 7178 0224 5190 3867 6066 2479 9177 0025 5602 4670 0013 2252 3714 1816 3029 6528 5666 1077 7069 3542 1453 7891 7627 5473</p> <p>2013 3978 9704 5918 1527 5517 4558 5285 2716 6399 0744 5630 0749 2843 1145 0720 9740 9963 5749 9640 3310 0400 8726 4908 5050</p> <p>3424 3007 8485 0032 4630 5739 9242 1778 7125 1475 3754 5831 5192 2549 6739 6659 6310 1637 1470 9930 3860 2756 5876 9719 0965</p> <p>4483 4346 1526 2556 5365 0723 5367 7379 5296 2036 1766 4951 7550 8590 0064 7153 2157 5246 1438 3058 6169 6890 6919 7920 7615</p> <p>2070 5135 8086 6299 1501 2419 1293 7736 3401 7536 7159 0038 6319 3004 7401 5993 8272 2915 6790 0844 5200 7550 0070 5533 5588</p> <p>1214 4631 3912 6539 3361 7355 6696 1761 8807 1357 5278 8567 8776 2528 3149 1114 9137 5798 1835 2836 6018 2077 9450 7608 4026</p> <p>1283 5952 9715 5743 0369 6441 9638 0328 1859 5879 6850 7652 2652 4920 4181 6934 0532 7570 5393 6422 1914 5330 0291 5831 9737</p> <p>1777 5467 0307 1041 4917 2458 3457 3783 8177 5263 4389 1230 5539 9553 3503 0608 3532 6261 1117 9444 1837 6399 2418 5196 4448</p> <p>0261 8580 5938 8400 7070 1850 8631 6910 0329 1372 7054 5302 1947 5674 7900 3932 9644 8597 5825 1375 3528 7337 8019 3240 3447</p> <p>3288 5416 6121 2861 8342 1617 5670 1873 4272 9961 4947 4349 7816 7798 3710 6110 1800 9072 6403 0557 7331 4418 8035 7281 9283</p> <p>0823 3750 5333 9697 0108 0461 1371 3670 3756 2557 3412 3021 1060 2821 8941 1985 0476 9700 4374 2889 0971 9002 1666 7413 5578</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token as described by the manufacturer in Table1. The available credit in the meter shall be incremented by 1 m³ after acceptance of each token.</p> <p>The meter credit should read 5 m³</p> <p>The meter credit should read 10 m³</p> <p>The meter credit should read 15 m³</p> <p>The meter credit should read 20 m³</p> <p>The meter credit should read 25 m³</p> <p>The meter credit should read 30 m³</p> <p>The meter credit should read 35 m³</p> <p>The meter credit should read 40 m³</p> <p>The meter credit should read 45 m³</p> <p>The meter credit should read 50 m³</p> <p>The meter credit should read 55 m³</p> <p>The meter credit should read 60 m³</p>

Step	Instruction	Expected Result
14	<p>Insert the following token</p> <p>2771 8059 0121 1816 4804</p> <p>1 m³ credit token encoded using DUTK₁.</p>	<p>If the value specified by the manufacturer in Table1 is less than or equal 60 then the PM or customer interface terminal shall reject the token as "Old" as described by the manufacturer in Table1.</p> <p>If the value specified by the manufacturer in Table1 is greater than 60 then the PM or customer interface terminal shall reject the token as "Duplicate" as described by the manufacturer in Table1.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token as described by the manufacturer in Table1.</p>
15	<p>Insert the following token</p> <p>0720 9740 9963 5749 9640</p> <p>1 m³ credit token encoded using DUTK₁.</p>	<p>The PM or customer interface terminal shall reject the token as "Duplicate", as described by the manufacturer in Table1.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token as described by the manufacturer in Table1.</p>

Do Steps 16 to 20 for Connection Time meters.

Step	Instruction	Expected Result
16	<p>Insert the following token</p> <p>7254 4936 2313 5779 0352</p> <p>Clear Connection Time credit token encoded using the DUTK₁.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token as described by the manufacturer in Table1. The available credit in the meter shall be 0 min.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token as described by the manufacturer in Table1.</p>
17	<p>Examine the maximum number of TID's specified by the manufacturer in Table1</p>	<p>The value shall be greater than or equal to 50. If not, the test fails.</p>

18	<p>Insert the following 1 min credit tokens encoded using DUTK1.</p> <p>1547 0919 6360 0295 0758 2599 5492 2918 1504 0012 6686 0381 6451 6870 1719 0935 0402 6171 2478 9615 1692 4812 8936 8939 0663</p> <p>1357 0650 6048 9616 7992 2599 2486 6307 4281 8776 7230 3891 7330 7871 6489 4772 4533 5875 2653 4790 0910 7245 6254 8877 1887</p> <p>1602 5451 0181 6418 5491 0282 0202 0429 9561 2763 2473 5848 5819 2869 1897 3603 0575 6363 9603 9913 2543 1297 1725 8895 2222</p> <p>3879 7798 3042 3337 7791 2986 0627 5393 7844 5265 2323 5630 1274 1537 1169 6253 1906 3516 7202 1394 5387 2652 7602 1479 7900</p> <p>2119 0737 2342 5976 3776 1596 7870 3275 8738 1323 4624 6982 1424 5605 4074 0202 2955 5429 0891 5038 3673 4856 9234 5187 3298</p> <p>4552 2525 1868 6601 7327 2620 1691 0511 9996 0502 2050 6244 7363 3605 2681 0160 4127 5410 7528 6773 3205 6445 4087 6897 6386</p> <p>1702 2715 0647 3403 0198 2218 0824 0985 3084 1964 6978 1164 2383 4565 4097 2492 8373 0362 7894 1335 6521 4831 8063 6727 6078</p> <p>0058 1717 9974 0828 6014 6736 8641 1783 6356 7622 5368 3243 6980 0340 9663 5438 7489 0866 5495 4001 6789 5220 7377 2565 1164</p> <p>4296 5053 7050 7892 5656 3162 6425 2068 9266 3512 7189 1643 0691 9491 6538 5292 6142 2219 0626 1041 5884 6296 2773 1605 0813</p> <p>5287 2537 6805 4798 7674 4662 2775 0029 9140 2205 3927 0193 3421 8595 0136 6586 0761 0551 4823 1773 2194 1733 6087 5497 8300</p> <p>0099 4580 7669 6456 4428 0307 4709 5228 3370 3678 2119 0152 5346 3228 2242 4274 1440 1363 1914 6578 1007 2600 7623 8248 8733</p> <p>3593 4697 9169 0651 7870 6539 1437 7541 5654 3844 5732 9179 9966 5540 2507 2857 1841 6570 5751 1951 1668 8554 8677 7058 7274</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token as described by the manufacturer in Table1. The available credit in the meter shall be incremented by 1 min after acceptance of each token.</p> <p>The meter credit should read 5 min</p> <p>The meter credit should read 10 min</p> <p>The meter credit should read 15 min</p> <p>The meter credit should read 20 min</p> <p>The meter credit should read 25 min</p> <p>The meter credit should read 30 min</p> <p>The meter credit should read 35 min</p> <p>The meter credit should read 40 min</p> <p>The meter credit should read 45 min</p> <p>The meter credit should read 50 min</p> <p>The meter credit should read 55 min</p> <p>The meter credit should read 60 min</p>
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Step	Instruction	Expected Result
19	<p>Insert the following token</p> <p>2599 5492 2918 1504 0012</p> <p>1 min credit token encoded using DUTK₁.</p>	<p>If the value specified by the manufacturer in Table1 is less than or equal 60 then the PM or customer interface terminal shall reject the token as "Old" as described by the manufacturer in Table1.</p> <p>If the value specified by the manufacturer in Table1 is greater than 60 then the PM or customer interface terminal shall reject the token as "Duplicate" as described by the manufacturer in Table1.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token as described by the manufacturer in Table1.</p>
20	<p>Insert the following token</p> <p>3603 0575 6363 9603 9913</p> <p>1 min credit token encoded using DUTK₁.</p>	<p>The PM or customer interface terminal shall reject the token as "Duplicate", as described by the manufacturer in Table1.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token as described by the manufacturer in Table1.</p>

Do Steps 21 to 25 for Electricity Currency meters.

Step	Instruction	Expected Result
21	<p>Insert the following token</p> <p>2415 8371 6786 7129 3040</p> <p>Clear electricity currency credit token encoded using the DUTK₁.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token as described by the manufacturer in Table1. The available credit in the meter shall be 0 currency units.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token as described by the manufacturer in Table1.</p>
22	<p>Examine the maximum number of TID's specified by the manufacturer in Table1</p>	<p>The value shall be greater than or equal to 50. If not, the test fails.</p>

Step	Instruction	Expected Result
23	Insert the following 1 currency unit credit tokens encoded using DUTK1.	The PM or customer interface terminal should indicate the acceptance of the token as described by the manufacturer in Table1. The available credit in the meter shall be incremented by 1 currency unit after acceptance of each token.
	4940 2550 4848 2268 8718 0420 6236 2969 7695 2979 4303 2944 6696 7368 9457 3352 5054 2159 8355 7713 7275 0639 7045 5516 6997	The meter credit should read 5 units
	0798 6521 9669 9655 6968 0479 6273 1187 9259 2540 1413 3098 1673 6998 4505 1912 7050 8835 0250 1012 7267 6190 3768 5819 1254	The meter credit should read 10 units
	6955 3475 0650 3371 5973 1804 8386 8067 9004 8529 0581 6057 6004 7329 7130 2868 0962 3455 2818 0033 6988 3178 0883 5059 0175	The meter credit should read 15 units
	7210 5029 8284 3752 8516 0949 8276 0030 5199 8343 1083 7709 0705 7477 4886 1655 3336 8473 0646 7713 5308 9604 0139 5060 3182	The meter credit should read 20 units
	5417 8111 4996 0398 5549 6628 9138 3026 2637 6869 7159 7645 7422 6577 5116 4081 3839 5187 3397 4811 5738 3789 7118 3931 3988	The meter credit should read 25 units
	4881 0760 8331 1236 0465 1292 2447 4173 5889 6060 6647 6891 1863 3676 0565 3963 9336 4509 4197 3511 2007 6088 0597 9678 5774	The meter credit should read 30 units
	1718 4804 3570 7329 5019 5076 8706 2563 1465 5989 5179 6906 5492 1078 4915 7296 1929 5629 8168 3856 3298 7641 7988 2083 9564	The meter credit should read 35 units
	4667 2865 7001 5353 9707 0614 2249 0541 8831 7320 2743 9880 5619 1440 8276 3009 8901 7201 1883 7317 1978 6598 7804 6886 1382	The meter credit should read 40 units
	1371 1525 5859 3123 9023 0603 2166 3692 4207 0343 2256 3360 6870 9756 7306 5589 7735 1037 8061 4517 2593 5514 3389 3873 7568	The meter credit should read 45 units
	0470 9545 3348 3187 1426 1014 5941 2803 4156 7480 5097 0969 5163 1075 9147 5527 8075 2419 3398 8730 6264 8138 4552 7419 2222	The meter credit should read 50 units
	4768 2767 1974 5002 0727 5307 0605 7597 8588 2084 2793 0476 4333 1253 6090 1381 2525 8897 1780 0365 6456 3440 8050 7311 8506	The meter credit should read 55 units
	6592 4069 1608 6302 2551 6636 1854 0204 2001 6903 1024 9412 9443 2163 4376 3963 9479 6853 7424 0010 4538 6838 6622 0720 9425	The meter credit should read 60 units

Step	Instruction	Expected Result
24	<p>Insert the following token</p> <p>0420 6236 2969 7695 2979</p> <p>1 currency unit credit token encoded using DUTK₁.</p>	<p>If the value specified by the manufacturer in Table1 is less than or equal 60 then the PM or customer interface terminal shall reject the token as "Old" as described by the manufacturer in Table1.</p> <p>If the value specified by the manufacturer in Table1 is greater than 60 then the PM or customer interface terminal shall reject the token as "Duplicate" as described by the manufacturer in Table1.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token as described by the manufacturer in Table1.</p>
25	<p>Insert the following token</p> <p>2868 0962 3455 2818 0033</p> <p>1 currency unit credit token encoded using DUTK₁.</p>	<p>The PM or customer interface terminal shall reject the token as "Duplicate", as described by the manufacturer in Table1.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token as described by the manufacturer in Table1.</p>

Do Steps 26 to 30 for Water Currency meters.

Step	Instruction	Expected Result
26	<p>Insert the following token</p> <p>4496 7906 1254 8126 1032</p> <p>Clear water currency credit token encoded using the DUTK₁.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token as described by the manufacturer in Table1. The available credit in the meter shall be 0 units.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token as described by the manufacturer in Table1.</p>
27	<p>Examine the maximum number of TID's specified by the manufacturer in Table1</p>	<p>The value shall be greater than or equal to 50. If not, the test fails.</p>

Step	Instruction	Expected Result
28	<p>Insert the following 1 currency unit tokens encoded using DUTK1.</p> <p>6279 2981 1313 7937 4984 4694 8599 4277 1755 1026 6672 5400 1892 6104 0192 5632 4139 0043 3923 2809 1736 9488 8607 8169 7708</p> <p>5280 2187 9710 2373 6305 5490 7826 1016 2071 4381 0558 4690 1925 0509 2039 0284 0120 6913 7078 8976 1479 7100 2133 6181 6399</p> <p>3074 0498 1232 1865 8495 3373 1079 7637 1489 3827 3750 0730 8525 5532 2819 1857 5848 5197 9738 4013 2363 3456 1944 6617 3797</p> <p>1165 3161 7957 6153 3609 2312 1812 4230 4249 4401 5376 4846 6700 2608 4979 0501 8125 5469 0453 8782 3857 7782 6312 8533 2812</p> <p>6397 8877 8754 8050 3742 4360 8577 8317 7135 9627 1676 6216 3832 4961 6495 1879 1308 6578 2282 3861 0444 9719 1262 8142 7480</p> <p>3337 0285 3916 4272 2815 4894 7033 7792 7231 4366 0531 4572 3629 7722 3926 1280 3122 7074 3878 9345 5651 5718 1003 9239 8091</p> <p>5902 9857 0199 7707 5965 0692 1649 3777 9189 3669 6290 5942 8976 2001 6146 0602 8479 1183 9286 8303 0244 3300 3994 1670 3468</p> <p>6940 9593 7245 7205 6309 3925 4930 0109 1107 4516 3154 8576 9597 4908 8144 2664 8891 0695 0653 3045 3782 7986 5631 4376 8048</p> <p>6302 6229 8938 1888 0897 0084 7215 4965 8936 6734 5998 5088 2393 3295 0307 2894 7935 2346 1563 2066 2585 3038 2080 4465 5642</p> <p>2324 7782 6524 9054 7730 2605 9788 7456 4961 7584 5913 4215 2467 9500 8980 4078 2959 5430 2119 5971 5015 0103 5431 2422 0834</p> <p>5267 1847 5344 8283 9582 5024 5473 7042 6182 7393 4250 9556 0197 4950 6926 4082 4384 7453 4038 5233 0308 1062 9160 4419 4325</p> <p>6229 1518 3710 5307 0234 1956 7865 4058 7491 0480 7086 2065 5188 6526 8888 0612 1207 4729 9282 6337 2132 8436 6008 3446 6795</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token as described by the manufacturer in Table1. The available credit in the meter shall be incremented by 1 currency unit after acceptance of each token.</p> <p>The meter credit should read 5 units</p> <p>The meter credit should read 10 units</p> <p>The meter credit should read 15 units</p> <p>The meter credit should read 20 units</p> <p>The meter credit should read 25 units</p> <p>The meter credit should read 30 units</p> <p>The meter credit should read 35 units</p> <p>The meter credit should read 40 units</p> <p>The meter credit should read 45 units</p> <p>The meter credit should read 50 units</p> <p>The meter credit should read 55 units</p> <p>The meter credit should read 60 units</p>

Step	Instruction	Expected Result
29	<p>Insert the following token</p> <p>4694 8599 4277 1755 1026</p> <p>1 unit currency credit token encoded using DUTK₁.</p>	<p>If the value specified by the manufacturer in Table1 is less than or equal 60 then the PM or customer interface terminal shall reject the token as "Old" as described by the manufacturer in Table1.</p> <p>If the value specified by the manufacturer in Table1 is greater than 60 then the PM or customer interface terminal shall reject the token as "Duplicate" as described by the manufacturer in Table1.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token as described by the manufacturer in Table1.</p>
30	<p>Insert the following token</p> <p>1857 5848 5197 9738 4013</p> <p>1 unit currency credit token encoded using DUTK₁.</p>	<p>The PM or customer interface terminal shall reject the token as "Duplicate", as described by the manufacturer in Table1.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token as described by the manufacturer in Table1.</p>

Do Steps 31 to 35 for Gas Currency meters.

Step	Instruction	Expected Result
31	<p>Insert the following token</p> <p>2729 8235 9676 2133 2830</p> <p>Clear Gas currency credit token encoded using the DUTK₁.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token as described by the manufacturer in Table1. The available credit in the meter shall be 0 units.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token as described by the manufacturer in Table1.</p>
32	<p>Examine the maximum number of TID's specified by the manufacturer in Table1</p>	<p>The value shall be greater than or equal to 50. If not, the test fails.</p>

Step	Instruction	Expected Result
33	<p>Insert the following 1 currency unit tokens encoded using DUTK1.</p> <p>4915 5696 2274 3589 7616 2151 8155 7086 4721 2525 6947 4079 3422 8988 5545 2529 0881 0476 0299 5999 4647 6795 6955 2952 5603</p> <p>3811 2997 1102 9776 2048 3700 5699 2382 8023 6640 3395 7389 1786 0541 9188 4145 6340 1746 4333 5577 4398 6172 4542 3679 4081</p> <p>4986 4726 5967 3454 5971 0148 5376 6978 4216 2220 6034 7308 0965 2253 8784 4417 6869 1868 6697 8909 4594 6451 9478 6236 3592</p> <p>5636 4436 0727 8012 2120 2914 8978 8779 5094 5705 6952 9007 7863 3418 0773 6547 9025 0325 0702 0613 5665 9835 3759 3326 5570</p> <p>6342 0241 6794 2355 8912 1860 9365 7981 3700 2707 5946 0295 6439 7047 7987 1833 4567 5080 2306 0351 4099 3476 4207 4659 1397</p> <p>5136 4625 8900 3861 7694 1632 5498 6381 8126 9649 6504 3670 5774 0156 9914 2073 8546 4445 6469 6961 2814 9598 5324 0334 5805</p> <p>1048 8975 6007 1745 7642 2277 7628 6645 6241 4720 0175 0026 7796 9105 6954 5495 9667 5971 0585 5911 4991 3526 1284 8116 2660</p> <p>3098 2716 6644 4631 1680 2365 1422 8553 9722 9882 5317 4378 8703 5742 2022 1542 7159 4022 7226 3500 7356 3906 2092 7326 7164</p> <p>4926 3840 5904 0185 5375 1973 1448 5656 1791 3524 3288 9798 6648 3328 7720 4558 4078 2003 4254 0106 6001 9696 9837 0529 0406</p> <p>5341 7316 4433 2938 6357 6029 6309 3601 6076 4514 2760 7926 1594 4946 2125 5644 7723 4215 0815 7062 0825 3117 8004 9849 1838</p> <p>0551 3593 9260 6793 7926 4284 4147 3992 2275 1958 5120 7399 4230 4247 5566 7050 6288 9489 5256 8821 5671 8287 1572 7162 9384</p> <p>4516 8185 0007 5195 2034 3050 3222 9835 1695 4350 5946 0851 2748 1953 0966 5483 3760 1470 6304 6774 3070 6504 0980 8189 6792</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token as described by the manufacturer in Table1. The available credit in the meter shall be incremented by 1 currency unit after acceptance of each token.</p> <p>The meter credit should read 5 units</p> <p>The meter credit should read 10 units</p> <p>The meter credit should read 15 units</p> <p>The meter credit should read 20 units</p> <p>The meter credit should read 25 units</p> <p>The meter credit should read 30 units</p> <p>The meter credit should read 35 units</p> <p>The meter credit should read 40 units</p> <p>The meter credit should read 45 units</p> <p>The meter credit should read 50 units</p> <p>The meter credit should read 55 units</p> <p>The meter credit should read 60 units</p>

Step	Instruction	Expected Result
34	<p>Insert the following token</p> <p>2151 8155 7086 4721 2525</p> <p>1 unit currency credit token encoded using DUTK₁.</p>	<p>If the value specified by the manufacturer in Table1 is less than or equal 60 then the PM or customer interface terminal shall reject the token as "Old" as described by the manufacturer in Table1.</p> <p>If the value specified by the manufacturer in Table1 is greater than 60 then the PM or customer interface terminal shall reject the token as "Duplicate" as described by the manufacturer in Table1.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token as described by the manufacturer in Table1.</p>
35	<p>Insert the following token</p> <p>4417 6869 1868 6697 8909</p> <p>1 unit currency credit token encoded using DUTK₁.</p>	<p>The PM or customer interface terminal shall reject the token as "Duplicate", as described by the manufacturer in Table1.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token as described by the manufacturer in Table1.</p>

Do Steps 36 to 40 for Time Currency meters.

Step	Instruction	Expected Result
36	<p>Insert the following token</p> <p>6228 0643 2462 2205 5433</p> <p>Clear time currency credit token encoded using the DUTK₁.</p>	<p>The PM or customer interface terminal should indicate the acceptance of the token as described by the manufacturer in Table1. The available credit in the meter shall be 0 kilowatt-hours.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token as described by the manufacturer in Table1.</p>
37	<p>Examine the maximum number of TID's specified by the manufacturer in Table1</p>	<p>The value shall be greater than or equal to 50. If not, the test fails.</p>

Step	Instruction	Expected Result
38	<p data-bbox="320 241 858 275">Insert the following 1 currency unit tokens encoded using DUTK1.</p> <p data-bbox="320 297 858 421">2010 6036 8237 4554 4274 4574 8697 9070 7425 0172 1263 9578 8188 3361 5531 0346 5457 3195 9611 6978 2342 9668 7831 4536 4410</p> <p data-bbox="320 443 858 566">4781 9300 8394 2744 4061 4768 3065 1859 7639 0592 0916 6283 3075 1438 2756 6774 5899 6621 6772 1909 1453 1566 3938 4724 9413</p> <p data-bbox="320 589 858 712">1634 5911 2841 6630 0213 5030 7290 7261 4516 3347 0466 1797 3309 3049 5828 5994 3170 4311 1857 0343 3955 4046 5093 4622 5721</p> <p data-bbox="320 734 858 857">5185 9242 5627 1922 5856 6664 8689 6688 0976 9112 1117 9656 7058 3127 9903 1235 2725 9213 3997 5139 0625 4633 7336 6475 6854</p> <p data-bbox="320 880 858 1003">5124 6443 3246 5508 4643 4217 2968 0865 4047 1577 0019 4431 5712 8495 9983 1535 5435 7918 9851 5384 2914 2143 5213 2695 5209</p> <p data-bbox="320 1025 858 1149">1332 2875 4243 9244 5541 5003 2814 5313 0130 6424 0280 6636 4021 2438 8157 1479 8809 8954 1741 6084 2599 8151 7667 1535 1078</p> <p data-bbox="320 1171 858 1294">6808 1368 8803 7739 2955 5853 0013 3243 6587 0614 1339 6249 0738 1576 6865 0962 4549 0637 6101 1159 3972 0771 1821 0728 7447</p> <p data-bbox="320 1317 858 1440">3921 0338 4502 8220 2156 3563 5945 2226 2656 3952 2362 8638 8823 3326 1350 3341 4672 5160 1579 0486 4444 8402 0046 5675 0537</p> <p data-bbox="320 1462 858 1585">3731 5739 9818 0321 7396 6180 5533 7860 6725 0355 2228 6086 8658 7187 4181 3870 5524 8101 8143 0336 1052 3247 0362 2541 8590</p> <p data-bbox="320 1608 858 1731">1081 1938 9854 8800 1749 3656 1234 2406 5171 1229 1755 9159 7254 1643 4979 1732 9050 4133 2850 3794 1392 9789 2235 8550 6234</p> <p data-bbox="320 1753 858 1877">4703 8709 0151 2984 4140 2819 0003 0742 7362 2738 0897 0012 4239 6766 3434 6349 5467 1182 9355 0379 7049 2851 4678 9320 1400</p> <p data-bbox="320 1899 858 2022">2487 4941 6491 5783 2004 1574 7779 0985 1966 7142 3358 6140 9312 7825 8699 4508 0715 7847 1017 7958 0636 9159 1492 8539 5791</p>	<p data-bbox="858 241 1401 365">The PM or customer interface terminal should indicate the acceptance of the token as described by the manufacturer in Table1. The available credit in the meter shall be incremented by 1 currency unit after acceptance of each token.</p> <p data-bbox="858 387 1401 409">The meter credit should read 5 units</p> <p data-bbox="858 533 1401 555">The meter credit should read 10 units</p> <p data-bbox="858 678 1401 701">The meter credit should read 15 units</p> <p data-bbox="858 824 1401 846">The meter credit should read 20 units</p> <p data-bbox="858 969 1401 992">The meter credit should read 25 units</p> <p data-bbox="858 1115 1401 1137">The meter credit should read 30 units</p> <p data-bbox="858 1261 1401 1283">The meter credit should read 35 units</p> <p data-bbox="858 1406 1401 1429">The meter credit should read 40 units</p> <p data-bbox="858 1552 1401 1574">The meter credit should read 45 units</p> <p data-bbox="858 1697 1401 1720">The meter credit should read 50 units</p> <p data-bbox="858 1843 1401 1865">The meter credit should read 55 units</p> <p data-bbox="858 1989 1401 2011">The meter credit should read 60 units</p>

Step	Instruction	Expected Result
39	<p>Insert the following token</p> <p>4574 8697 9070 7425 0172</p> <p>1 unit currency credit token encoded using DUTK₁.</p>	<p>If the value specified by the manufacturer in Table1 is less than or equal 60 then the PM or customer interface terminal shall reject the token as "Old" as described by the manufacturer in Table1.</p> <p>If the value specified by the manufacturer in Table1 is greater than 60 then the PM or customer interface terminal shall reject the token as "Duplicate" as described by the manufacturer in Table1.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token as described by the manufacturer in Table1.</p>
40	<p>Insert the following token</p> <p>5994 3170 4311 1857 0343</p> <p>1 unit currency credit token encoded using DUTK₁.</p>	<p>The PM or customer interface terminal shall reject the token as "Duplicate", as described by the manufacturer in Table1.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token as described by the manufacturer in Table1.</p>

4.1.78 CTSF75 – DUTK to DITK key change

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the DUTK to DITK key change.

Step	Instruction	Expected Result
1	<p>Insert the following token</p> <p>2216 6025 2317 2900 3564</p> <p>First token of Set PM Key token pair. DUTK₁ to DITK₀ key-change token. (KENHO = F, KRN = 1, RO = 1, Res = 0, KT = 0)</p>	<p>The meter shall reject this key change request with a TokenResult of Reject. . (if the token is rejected at this stage, do not continue with this test).</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>
2	<p>Insert the following token.</p> <p>4806 0746 4581 1025 6544</p> <p>Second token of Set PM Key token pair. DUTK₁ to DITK₀ key-change token. (KENHO = F, TI = 01)</p>	<p>The PM or customer interface terminal shall reject the token.</p> <p>After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.</p>

4.1.79 CTSF76 – DUTK to DCTK key change

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the DUTK to DCTK key change.

Step	Instruction	Expected Result
1	<p>Insert the following token</p> <p>5245 4551 5789 3495 9606</p> <p>First token of Set PM Key token pair. DUTK₁ to DCTK₃ key-change token. (KENHO = F, KRN = 1, RO = 1, Res = 0, KT = 3)</p>	<p>The PM or customer interface terminal shall accept the token.</p>

Step	Instruction	Expected Result
2	Insert the following token. 1803 8483 3211 0293 9928 Second token of Set PM Key token pair. DUTK ₁ to DCTK ₃ key-change token. (KENHO = F, TI = 01)	The PM or customer interface terminal shall reject the token. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

4.1.80 CTSF77 – DUTK coded accepting tokens when in power limiting state

Overview: This test verifies the MeterApplicationProcess for compliance with respect to the meter accepting tokens while in a power limiting state.

Note: this test only required for electricity meters (currency and kWh) that support a power limiting feature.

Step	Instruction	Expected Result
1	Unpower the PM, Connect the 1.2kW load, and re-power the PM.	After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token. Wait for the PM to enter a power limiting state as described by the manufacturer in Table1.
2	Insert the following token: 5917 4038 5564 2491 8650 Clear credit token encoded using DUTK ₁ .	The PM or customer interface terminal should indicate the acceptance of the token. After a period of time the PM or customer interface terminal should indicate that it is ready to accept a token.

5 Annexure A – Compliance Verification Request

1.	Manufacturer:		
2.	Product Name/Model:		
3.	Product Firmware Version:		
4.	Contact Name:		
5.	Mobile Number:		
	Phone Number:		
	Faxcimile Number:		
	Email Address:		
6.	Physical and Postal Address		
7.	Date:		
8.	Indicate if the samples will be collected or destroyed after test	Collected	Destroyed

6 Annexure A.1 – Entity F Additional Information

Table 1 - Entity F Supplier Submitted Information

1.	Allocated Manufacturer Code:			
2.	Poly-phase meter:	Yes	No	(Tick what is applicable)
3.	Does the payment meter support MaximumPowerLoad tokens	Yes	No	(Tick what is applicable)
4.	Does the meter support tamper	Yes	No	(Tick what is applicable)
5.	No of keychange tokens supported	2	3	(Tick what is applicable)
6.	Initiate test number 6 token supported:	Yes	No	(Tick what is applicable)
7.	Initiate test number 7 token supported:	Yes	No	(Tick what is applicable)
8.	Initiate test number 8 token supported:	Yes	No	(Tick what is applicable)
9.	Initiate test number 9 token supported:	Yes	No	(Tick what is applicable)
10.	Initiate test number 11 token supported:	Yes	No	(Tick what is applicable)
11.	Initiate test number 16 token supported: Mandatory if the meter supports 3 keychange tokens	Yes	No	(Tick what is applicable)
12.	Does the meter support decoder key expiration:	Yes	No	(Tick what is applicable)
13.	Does the meter support phase unbalance:	Yes	No	(Tick what is applicable)
14.	Does the meter have a tamper detect capability:	Yes	No	(Tick what is applicable)
15.	Does the meter's internal latch switch on with zero credit during test number 0?	Yes	No	(Tick what is applicable)
16.	Does the meter support a load switch test?	Yes	No	(Tick what is applicable)
17.	Does the meter support SetFlag tokens defined in STS202-5? (Class2 Subclass 10)	Yes	No	(Tick what is applicable)
18.	Does the meter support SetControlValue tokens defined in STS202-5? (Class2 Subclass 10)	Yes	No	(Tick what is applicable)
19.	Does the meter support Class2 Subclass 11 tokens?	Yes	No	(Tick what is applicable)
20.	Describe how the meter indicates that it is ready to receive a token:			
21.	Describe how the meter indicates the acceptance of a token:			
22.	Describe how the meter indicates the rejection of a token:			
23.	Describe how the meter indicates that a token is old or has expired:			
24.	Describe how the meter indicates that a token has been previously used:			
25.	Describe how the meter indicates that a key change operation completed successfully:			
26.	Describe how the meter indicates that a credit token has been rejected due to a credit overflow condition:			

27.	Describe how the meter indicates that a token has been rejected due to the expiration of the decoder key:				
28.	Describe how the meter indicates that a token has been rejected due to the incorrect insertion of the token in the case of a magnetic token; or incorrectly typed in where the meter is a numeric meter.				
29.	Describe how the meter indicates the acceptance of the first "Set PM key" token of the "Set PM key" token pair.				
30.	Describe how the meter indicates the acceptance of the second "Set PM key" token of the "Set PM key" token pair.				
31.	Maximum amount of available credit the meter can store:				
32.	Maximum number of TIDs that can be stored in the meter's non-volatile memory store:				
33.	If the meter has a tamper detect capability; describe the process to be followed to place the meter in a tampered state/condition and describe how the meter indicates that it is in a tampered state.				
34.	Describe how the meter indicates that it is in a power limiting state.				
35.	State which utility is supported if this is a units based meter	Electricity	Water	Gas	Time
36.	State which currency is supported if this is a currency based meter	Electricity	Water	Gas	Time

7 Annexure B – Entity Type F Test Overviews

All tests test for the general token acceptance and PM display indicators as well indirectly testing for the implementations indicated in the comments column.

Test No	Description	IEC62055-41 Applicable Clause	Other implementations tested
CTSF01	DITK-DITK key change		This test currently not done.
CTSF02	DITK coded accepting a credit token	8.2, 8.3, 8.4	Transfer credit token
CTSF03	DITK coded PM-specific management tokens	8.2, 8.3, 8.7	ClearCredit token
CTSF04	DITK coded non-PM-specific management tokens	8.2, 8.3, 8.5	InitiateMeterTest/Display token
CTSF05	DITK to DCTK key change	8.2, 8.3, 8.9	Set1stSectionDecoderKey token Set2ndSectionDecoderKey token
CTSF06	DCTK to DCTK key change	8.2, 8.3, 8.9	Set1stSectionDecoderKey token Set2ndSectionDecoderKey token
CTSF07	DCTK coded accepting credit token	8.2, 8.3, 8.4	Transfer credit token
CTSF08	DCTK coded accepting maximum power limit token	8.2, 8.3, 8.6	SetMaximumPowerLimit token
CTSF09	DCTK coded accepting clear PM electricity credit	8.2, 8.3, 8.7	ClearCredit token
CTSF15			
CTSF16	DCTK coded processing set PM key with roll over	8.2, 8.3, 8.9	Set1stSectionDecoderKey token Set2ndSectionDecoderKey token
CTSF17	DCTK coded processing clear tamper condition	8.2, 8.3, 8.11	ClearTamperCondition token
CTSF18	DCTK coded processing set phase unbalance limit	8.2, 8.3, 8.12	SetMaximumPhasePowerUnbalanceLimit token
CTSF19	DCTK coded class 2 STS reserved token	8.2, 8.3, 8.14	
CTSF20	DCTK coded class 3 STS reserved token	8.2, 8.3, 8.16	
CTSF21	DCTK to DITK key change	8.2, 8.3, 8.9	Set1stSectionDecoderKey token Set2ndSectionDecoderKey token
CTSF22	DCTK coded accepting tokens when in power limiting state	8.2, 8.3, 8.11	
CTSF23	DITK to DDTK key change	8.2, 8.3, 8.9	Set1stSectionDecoderKey token Set2ndSectionDecoderKey token
CTSF24	DDTK to DDTK key change	8.2, 8.3, 8.9	Set1stSectionDecoderKey token Set2ndSectionDecoderKey token
CTSF25	DDTK coded accepting credit token	8.2, 8.3, 8.4	Transfer credit token

CTSF26	DDTK coded accepting maximum power limit token	8.2, 8.3, 8.6	Management token
CTSF27 -	DDTK coded accepting clear PM credit (all utilities)	8.2, 8.3, 8.7	Management token
CTSF32 CTSF33	DDTK coded accepting clear PM reserved credit registers	8.2, 8.3, 8.7	Management token
CTSF34	DDTK coded processing set tariff rate	8.2, 8.3, 8.8	Management token (reserved)
CTSF35	DDTK coded processing set PM key with roll over	8.2, 8.3, 8.5, 8.7, 8.9	Set1stSectionDecoderKey token Set2ndSectionDecoderKey token
CTSF36	DDTK coded processing clear tamper condition	8.2, 8.3, 8.5, 8.11	InitiateMeterTest/Display token ClearTamperCondition token
CTSF37	DDTK coded processing set phase unbalance limit	8.2, 8.3, 8.5, 8.12	InitiateMeterTest/Display token
CTSF38	DDTK coded processing set water meter factor		Compliance not required (reserved token)
CTSF39	DDTK coded class 2 STS reserved token	8.2, 8.3, 8.14	
CTSF40	DDTK coded class 3 STS reserved token	8.2, 8.3, 8.16	
CTSF41	DDTK coded class 0 STS reserved token	8.2, 8.3	
CTSF42 -	DDTK coded accepting non-PM-specific test tokens	6.2.3, 6.3.3, 6.3.8, 8.2, 8.3, 8.5	
CTSF55 CTSF56	DDTK to DITK key change	8.2, 8.3, 8.9	Set1stSectionDecoderKey token Set2ndSectionDecoderKey token
CTSF57	DDTK to DCTK key change	8.2, 8.3, 8.9	Set1stSectionDecoderKey token Set2ndSectionDecoderKey token
CTSF58	DITK to DUTK key change	8.2, 8.3, 8.9	Set1stSectionDecoderKey token Set2ndSectionDecoderKey token
CTSF59	DUTK to DUTK key change	6.2.7.1, 8.2, 8.3, 8.9	Set1stSectionDecoderKey token Set2ndSectionDecoderKey token Set3rdSectionDecoderKey token (if implemented)
CTSF60	DUTK coded accepting credit token	8.2, 8.3, 8.4	
CTSF61	DUTK coded accepting maximum power limit token	8.2, 8.3, 8.6	
CTSF62 -	DUTK coded accepting clear PM credit	8.2, 8.3, 8.7	
CTSF68 CTSF69	DUTK coded processing set PM key with roll over	8.2, 8.3, 8.5, 8.7, 8.9	Set1stSectionDecoderKey token Set2ndSectionDecoderKey token
CTSF70	DUTK coded processing clear tamper condition	8.2, 8.3, 8.5, 8.11	InitiateMeterTest/Display token

CTSF71	DUTK coded processing set phase unbalance limit	8.2, 8.3, 8.5, 8.12	InitiateMeterTest/Display token
CTSF72	DUTK coded class 2 STS reserved token	8.2, 8.3, 8.14	
CTSF73	DUTK coded class 3 STS reserved token	8.2, 8.3, 8.16	
CTSF74	DUTK coded non-volatile memory TID store	7.3.7, 8.2, 8.3, 8.4	TransferCredit token ClearCredit token
CTSF75	DUTK to DITK key change	8.2, 8.3, 8.9	Set1stSectionDecoderKey token Set2ndSectionDecoderKey token
CTSF76	DUTK to DCTK key change	8.2, 8.3, 8.9	Set1stSectionDecoderKey token Set2ndSectionDecoderKey token
CTSF77	DUTK coded accepting tokens when in power limiting state	8.2, 8.3, 8.11	