**Annex 1**

**"Electronic Hardware Test and Application Software meters G4 and G6"**

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| Scenario | Test identifier | Test |
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| ***Hardware*** | ***HW-01*** | INITIAL DISPLAY POWER-UP CHECK |
| ***Hardware*** | ***HW-02*** | HDLC COMMUNICATION ACTIVATION CHECK |
| ***Hardware*** | ***HW-03*** | NB-IoT COMMUNICATION ACTIVATION CHECK |
| ***Hardware*** | ***HW-04*** | REGISTRATION FIRMWARE VERSIONS INFORMATION CHECK |
| ***Synchronisation*** | ***SO-01*** | CLOCK AND SYNCHRONISATION SETTINGS CHECK |
| ***Synchronisation*** | ***SO-02*** | DAYLIGHT SAVING TIME ACTIVATION CHECK |
| ***Synchronisation*** | ***SO-03*** | DAYLIGHT SAVING TIME SETTING CHECK |
| ***Synchronisation*** | ***SO-04*** | STANDARD TIME MANAGEMENT CHECK |
| ***Synchronisation*** | ***SO-05*** | DAYLIGHT SAVING TIME DEACTIVATION CHECK |
| ***Synchronisation*** | ***SO-06*** | FORWARD SYNCHRONISATION CHECK <4H |
| ***Synchronisation*** | ***SO-07*** | BACKWARD SYNCHRONISATION CHECK <4H |
| ***Synchronisation*** | ***SO-08*** | FORWARD SYNCHRONISATION CHECK >4H |
| ***Synchronisation*** | ***SO-09*** | BACKWARD SYNCHRONISATION CHECK >4H DIFFERENT GAS DAY |
| ***Synchronisation*** | ***SO-10*** | SYNCHRONISATION MAINTENANCE CHECK WITHOUT POWER SUPPLY |
| ***Consumer information*** | ***IC-01*** | CONSUMER INFORMATION DISPLAY CHECK |
| ***Consumer information*** | ***IC-02*** | User message management check |
| ***Parametrisation*** | ***PARAM-01*** | FACTORY PROGRAMMING COMPLIANCE CHECK |
| ***Parametrisation*** | ***PARAM-02*** | FACTORY PROGRAMMING COMPLIANCE CHECK   ( VALVE ) |
| ***Parametrisation*** | ***PARAM-03*** | FACTORY PROGRAMMING COMPLIANCE CHECK NB-IoT |
| ***Fraud detection and reporting*** | ***RSF-01*** | POWER FAILURE |
| ***Fraud detection and reporting*** | ***RSF-02*** | ATTEMPTED FRAUD ACCESS ELECTRONIC PARTS |
| ***Fraud detection and reporting*** | ***RSF-03*** | ATTEMPTED UNAUTHORISED CONFIGURATION OR MODIFICATION OF PARAMETERS |
| ***Fraud detection and reporting*** | ***RSF-04*** | ATTEMPTED FRAUD VALVE BLOCKING GROUP |
| ***Fraud detection and reporting*** | ***RSF-05*** | MAGNETIC FRAUD ATTEMPT |
| ***Fraud detection and reporting*** | ***RSF-06*** | ATTEMPTED REVERSE FLOW FRAUD |
| ***Supply Management*** | ***GF-01*** | VALVE OPENING IN THE ABSENCE OF FLOW |
| ***Supply Management*** | ***GF-02*** | VALVE CLOSURE IN THE ABSENCE OF FLOW |
| ***Supply Management*** | ***GF-03*** | VALVE CLOSURE WITH FLOW QMAX = 6M3/H |
| ***Supply Management*** | ***GF-04*** | SAFETY VALVE OPENING IN THE PRESENCE OF FLOW |

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| Scenario | Test identifier | Test |
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| ***Supply Management*** | ***GF-05*** | PRESENCE OF FLOW ON CLOSED VALVE |
| ***Supply Management*** | ***GF-06*** | DEFERRED VALVE CLOSURE IN THE ABSENCE OF FLOW |
| ***Supply Management*** | ***GF-07*** | DEFERRED VALVE OPENING IN THE ABSENCE OF FLOW |
| ***Measurement and load profile management*** | ***GMP-01*** | INSTANT DATA REGISTRATION |
| ***Measurement and load profile management*** | ***GMP-02*** | DAILY PROFILE REGISTRATION |
| ***Measurement and load profile management*** | ***GMP-03*** | BILLING PERIOD REGISTRATION |
| ***Measurement and load profile management*** | ***GMP-04*** | DATA RETENTION IN CASE OF POWER FAILURE |
| ***Measurement and load profile management*** | ***GMP-05*** | PARAMETER RETENTION IN CASE OF POWER FAILURE |
| ***Measurement and load profile management*** | ***GMP-06*** | STORAGE OF CONSUMPTION IN DEFAULT RANGE |
| ***Alarm detection*** | ***RSA-01*** | OUT-OF-RANGE TEMPERATURE MEASUREMENT |
| ***Alarm detection*** | ***RSA-02*** | OUT-OF-RANGE MAX. FLOW RATE MEASUREMENT |
| ***Alarm detection*** | ***RSA-03*** | VERIFICATION OF METROLOGICAL EVENT LOG STRUCTURE |
| ***Alarm detection*** | ***RSA-04*** | VERIFICATION OF NON-METROLOGICAL EVENT LOG STRUCTURE |
| ***Alarm detection*** | ***RSA-05*** | COMPILING METROLOGICAL EVENTS LOG |
| ***Infrastructure management and maintenance*** | ***GMI-01*** | MAINTENANCE STATUS ACTIVATION |
| ***Infrastructure management and maintenance*** | ***GMI-02*** | REGISTRATION IN MAINTENANCE STATUS |
| ***Infrastructure management and maintenance*** | ***GMI-03*** | AUTHORISED BATTERY CHANGE |
| ***Dynamic multi-tariff capacity*** | ***CMD-01*** | NEW TARIFF PROGRAMME |
| ***Dynamic multi-tariff capacity*** | ***CMD-02*** | CONTRACT SWITCH |
| ***Dynamic multi-tariff capacity*** | ***CMD-03*** | NEW BILLING PERIOD |

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| Scenario | Test identifier | Test |
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| ***Reporting data to the SAC*** | ***SAC-01*** | AMM TAKING CHARGE TEST |
| ***Reporting data to the SAC*** | ***SAC-02*** | READING RECOVERY TEST |
| ***Reporting data to the SAC*** | ***SAC-03*** | EVENT RECOVERY TEST AND DIAGNOSTICS |
| ***Reporting data to the SAC*** | ***SAC-05*** | NB-IoT Diagnostics GSM value TEST |
| ***Software Update Management*** | ***GAS-01*** | LOCAL FIRMWARE APPLICATION UPDATE |
| ***Software Update Management*** | ***GAS-02*** | FIRMWARE APPLICATION UPDATE FROM SAC |
| ***Safety management*** | ***GS-14*** | RUNNING TIME MANAGEMENT |
| ***Safety management*** | ***GS-22*** | KEY CHANGE REGISTRATION |
| ***Safety management*** | ***GS-23*** | INCORRECT KEY ACCESS |
| ***Safety management*** | ***GS-24*** | KEY MANAGEMENT BY TIME T |
| ***Safety management*** | ***GS-36*** | MAINTENANCE ACCESS KEY MANAGEMENT |
| ***Battery Consumption*** | ***CONS-MT-01*** | Metrology - Daily consumption |
| ***Battery Consumption*** | ***CONS-MT-02*** | Metrology - Display consumption on |
| ***Battery Consumption*** | ***CONS-MT-03*** | Metrology - consumption optical port active |
| ***Battery Consumption*** | ***CONS-MT-04*** | Metrology - consumption valve closure |
| ***Battery Consumption*** | ***CONS-MT-05*** | Metrology - consumption valve opening |
| ***Battery Consumption*** | ***CONS-CM-01*** | Communication - consumption missing SIM call |
| ***Battery Consumption*** | ***CONS-CM-02*** | Communication - consumption call record not present in AMM/eMMG |
| ***Battery Consumption*** | ***CONS-CM-03*** | Communication - consumption daily call GDM Active good signal |
| ***Battery Consumption*** | ***CONS-CM-04*** | Communication - consumption daily call GDM Active Low signal (> 70 dbm < -80 dbm) |
| ***Battery Consumption*** | ***CONS-CM-05*** | Communication - consumption daily call GDM Active minimum signal (> 80dbm < 90dbm) |
| ***Battery Consumption*** | ***CONS-CM-06*** | Communication - consumption daily call GDM Active absent signal (> 100dbm ) |
| ***Cybersecurity*** | ***CYBSEC-01*** | Vulnerability check |