|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| GENERAL INFORMATION | | | | | | |
| **Applicant** *(manufacturer)* | | | | | | |
| Name | |  | | | | |
| Contact person(s) | |  | | | | |
| Address | |  | | | | |
| Place | |  | | | | |
| Country | |  | | | | |
| **Production location** *(only if different from manufacturer)* | | | | | | |
| Name | |  | | | | |
| Address | |  | | | | |
| Place | |  | | | | |
| Country | |  | | | | |
| PRODUCT SPECIFICATION | | | | | | |
| Type designation (type name) | |  | | | | |
| Meter type | | static  electro-mechanical | | | | |
| Network application | | 1p/2w  3p/3w  3p/3w ARON  3p/4w | | | | |
| Connection type | | direct connected  CT  CT /VT | | | | |
| Reference voltage | | [V] | | | | |
| Minimum current | | [A] | | | | |
| Reference current | | [A] | | | | |
| Maximum current | | [A] | | | | |
| Reference frequency | | 50 Hz  60 Hz | | | | |
| Measurement capabilities | | active import  active export  reactive import  reactive export | | | | |
| Test output | | visible LED  IR LED  S0 | | | | |
| Meter constant | | [imp/kWh] | | | | |
| Accuracy class | | Active IEC  2  1  0,5S  0,2S  Active MID  A  B  C  Active OIML  A  B  C  D  Reactive IEC  3  2  1(S)  0,5S | | | | |
| Operating temperature range | | .... °C to .... °C | | | | |
| Environmental application | | Indoor  IP51  IP53  IP54 | | Outdoor IP54 | | |
| IP 5x (dust) without suction  or with suction | | | | |
| Supply Control Switch (SCS)\* | | yes  no \* also called breaker | | | | |
| Load Control Switch (LCS/ACS)\*\* | | yes  no \*\* relay to switch external loads | | | | |
| Communication interfaces | | optical  MBUS  PLC  RS-232  RS-485  GPRS  ZigBee  Ethernet  other | | | | |
| SAMPLE REQUIREMENTS | |  | | | | |
| * Samples shall display all tariffs at 0,01 (Direct connected) or 0,0001 (CT connected) kWh/kVAr resolution, time & date (time switch only) and checksum * The Supply Control Switch (if applicable) shall be closed at all times (e.g. no switch off at predefined current) * The test output must be available for active and (if applicable) reactive energy. If different samples for different measurement capabilities are needed, this needs to be communicated upfront. | | | | | |  |
| MAIN SERVICES | | | | | | |
| Type tests for Measuring Instruments Directive (MID 2014/32/EU) Annex B  in accordance with   * EN50470-1 in conjunction with EN5470-2 or -3 as applicable * WELMEC 7.2 (type P\*, Extension I3 and L) * Immunity investigation of electromagnetic disturbances in the frequency range 2-150 kHz (conform 61000-4-19 for current only, continuous waves)   *note: IEC 62052-11 and IEC 62053-11, -21, -22 as applicable are covered automatically in these tests*  Upper temperature  +40°C  +55°C  +70°C  Lower temperature  -10°C  -25°C  -40°C  Additional WELMEC 7.2 Extensions  S (software separation)  D (software download)  \* if a USB interface is available, type U will be applicable  USB available | | | | | |  |
| Certificate of Conformity | | | | | |  |
| IEC 62052-11 in conjunction with IEC 62053-11, -21 and/or -22 as applicable for active energy type tests | | | | | |  |
| ADDITIONAL TEST SERVICES | | | | | |  |
| IEC 62052-31 | Safety tests | | | | |  |
| IEC 62053-23 | Reactive energy (class 2/3) | | | | |  |
| IEC 62053-24 | Reactive energy (class 05S,1S or 1) | | | | |  |
| IEC 62055-31 | Pre-payment meters | | | | |  |
| SANS 1524-1 | Electricity payment systems - Part1: payment meters | | | | |  |
| IEC 62059-32-1 | Durability test | | | | |  |
| UKCA service | UK Declaration of Conformity (expected as of Q3 2021) | | | | |  |
| - | Accuracy test with one phase export and other phases import | | | | |  |
| SP1618 | Impulse voltage test at 12 kV (for Scandinavian market) | | | | |  |
| Welmec 11.2 | Load profiles | | | | |  |
| OIML R 46 | Active Electrical Energy Meters | | | | |  |
| - | Extended Radio Frequency Immunity test up to 6 GHz | | | | |  |
| IEC 62586-2 IEC 61000-4-30 | Power Quality Analyzers | | | | |  |
| IEC 61557-1&12 | Power Monitoring Devices | | | | |  |
| M6-1 | Extra requirements for Australia | | | | |  |
| MESS EV | National German approval for reactive energy | | | | |  |
| IEC 62052-21 IEC 62054-21 | Time switch  crystal-controlled  synchronous  (Note that both can apply) | | | | |  |
| IEC 62052-21 IEC 62054-11 | Ripple control receiver | | | | |  |
| IEC 62055-31 | Circuit breaker Annex C  UC2  UC3  UC4 | | | | | |
| IEC 60999-1 | Terminal tests | | | | |  |
| EN 50065-1 | Power Line Communication (PLC)  A band  C band | | | | | |
| OSGP | Open Smart Grid Protocol | | | | |  |
| EN 300 220-2 EN 301 489-3 | HF module | | | | |  |
| EN 3014891(7) EN 300 328 | Zigbee communication | | | | |  |
| CEN/CLC/ETSI | Penetration testing. Security testing conform the “Minimum security requirements for AMI components”  DLMS – over HDLC  DLMS – over TCP/IP  Applied security level  0 (symmetrical cryptography)  1 (asymmetrical cryptography – short keys)  2 (asymmetrical cryptography – long keys) | | | | | |
| LoRaWAN | version 1.0  version 1.1 | | | | | |
| wM-BUS |  | | | | | |
| IEC 62443 | IEC 62443 (cyber) security for industrial automation and control systems covers all aspects playing a role in cyber security in process automation, including those applicable to field instruments and network components.  Aimed at the complete life-cycle, criteria include for instance design of complete systems and quality assurance procedures on patch management. Thereby, the IEC provides independently verifiable cyber security assessment to all types of stakeholders. Cyber security assessment based on IEC 62443 | | | | | |
| Other requests | | | | | | | |
|  | | | | | | | |
| SYSTEM CERTIFICATION SERVICES | | | | | | | |
| If you want to put meters on the market in the European Union, you also need to able to perform a conformity assessment according to module D, F or H1 (see MID 2014/32/EU for an explanation). NMi also provides this service. For optimal preparation of the audit it is adviced to perform a training and have a pre-audit first. | | | | | | | |
| Training | | | | | yes  no | | |
| Pre-audit | | | | | yes  no | | |
| Audit | | | | | yes  no | | |
| MARKET INFORMATION | | | | | | | |
| When are your samples available? | | |  | | | | |
| Do you have a specific deadline? | | |  | | | | |
| What are your targeted markets? | | |  | | | | |