



C E R T I F I C A T E

Certificate registration number: G3.2403.602.2.C6

Certificate holder: Hexing Electrical Co., Ltd.

Product designation: HXE110,
Hardware version meter: PHXE110R4800105,
Hardware version module: PMPP72R1100201,
Firmware version 3.05.04

Certification date: March 13th 2024

This certificate indicates the above-mentioned product successfully completed certification testing with regards to the G3-Alliance reference specification 06/2021. The optional feature coherent mode of the G3 protocol is also covered by this certification.

The certificate applies to certification profile FCC Multipurpose Worldwide and the device was configured as a PAN-Device.

Test cases have been performed as described in the test report referred to below. This certificate is granted on account of tests conducted by TÜV Rheinland in Yokohama, Japan in February 2024. The results and remarks can be found in the complete test report.

Table with 3 columns: Applied tests, Performed by, Document evidence. Row 1: Conformance, interoperability and performance testing according to the test specification referenced by the test report, TÜV Rheinland Japan, JP24S2BQ 001

The device tested is a G3-PLC FCC 1-phase meter. The meter is equipped with the G3-PLC certified platform REL-G3PLC-CPX3+TRG with certificate no. G3.2204.507.1.C6. The Protocol Implementation Conformance Statement in the Annex includes the PICS related to performance and is an integral part of this certificate. This certificate is valid from March 13th 2024.

The certificate is only applicable to the product described above and permits the use of the G3-PLC certification logo as laid down in the G3-Alliance logo license agreement.

This certificate does not imply assessment of the production. This certificate shall not be defined, or used as a guarantee covering quality of a product which includes G3-PLC. The liability of the Alliance and the test laboratory or any of her representatives is excluded for any damages or losses of the certified company.

Paris, March 13th 2024

For the G3-Alliance:

Marc Delandre
Chairman

602
Madeleine Francillard

Madeleine Francillard
Chair Certification Program





Annex 1: Protocol Implementation Conformance Statement (PICS)

Feature implementation statement

| Name | Value | Description |
|----------------------------------------|-------|----------------------------------------------------------------------------------------------------------------|
| BAND_PLAN | FCC | Indicates whether the band-plan supported by the device |
| BAND_PLAN_RF | N/A | Indicates whether the RF band plan(s) supported by the device |
| FEATURE_HYBRID_RF | FALSE | Indicates whether Hybrid PLC+RF feature is supported |
| FEATURE_PAN_COORDINATOR | FALSE | Indicates whether the device is a PAN-Coordinator (true) or a normal device (false) |
| FEATURE_COHERENT_MODULATION | TRUE | Indicates whether coherent modulation is supported |
| FEATURE_EAP_SERVER | FALSE | Indicates whether an EAP-PASK server is implemented by the DUT Apply only if FEATURE_PAN_COORDINATOR = true |
| FEATURE_D8PSK_MODULATION | TRUE | Indicates whether D8PSK modulation is supported |
| FEATURE_ROUTING | TRUE | Indicates whether the routing is implemented by the IUT |
| FEATURE_SECURITY | F1 | Indicates whether the security implemented by the device. Possible values are: F1, F2 |
| FEATURE_ACTIVE_SCAN | TRUE | Indicates whether the active scan process is done by the IUT after power-up |
| FEATURE_PREAMBLE_COEXISTENCE_MECHANISM | FALSE | Indicates whether the preamble-based coexistence mechanism is used by the IUT |



Annex 2: Protocol Implementation Conformance Statement (PICS)

PICS related to performance (1/2)

The device tested is a G3-PLC FCC 1-phase meter communicating on phase 1.
Testing was performed on phase 1.

Operating voltage applied for certification testing was AC230V/50Hz.

| Name | Value | Unit | Description |
|-------------------------------------------------------------------------------------|-------|------|-------------|
| <p>PICS related to performance are available through manufacturer only.</p> | | | |






Annex 2: Protocol Implementation Conformance Statement (PICS)

PICS related to performance (2/2)

| Name | Value | Unit | Description |
|-------------------------------------------------------------------------------------|-------|------|-------------|
| <p>PICS related to performance are available through manufacturer only.</p> | | | |

Annex 3: Copy of test report cover sheet

| | | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------|
| Test Report – Products <i>Prüfbericht - Produkte</i> | |  | |
| Test report no.: <i>Prüfbericht-Nr.:</i> | JP24S2BQ 001 | Order No.: <i>Auftragsnr.:</i> | 150287084 10 |
| | | <i>Page 1 of 55</i> <i>Seite 1 von 55</i> | |
| Client reference no.: <i>Kunden-Referenz-Nr.:</i> | HXE110 | Order date: <i>Auftragsdatum:</i> | 2024-01-15 |
| Client: <i>Auftraggeber:</i> | Hexing Electrical Co., Ltd., 1418 Moganshan Road., 310011 Hangzhou City, P.R. China | | |
| Test item: <i>Prüfgegenstand:</i> | Meter (FCC) | | |
| Identification / Type no.: <i>Bezeichnung / Typ-Nr.:</i> | HXE110 | | |
| Order content: <i>Auftrags-Inhalt:</i> | G3 Certification Test | | |
| Test specification: <i>Prüfgrundlage:</i> | G3-Alliance - Conformance Tests Suite Specification - v0.37 G3-Alliance - 1to1-PHY-Interoperability-Tests-Specification-v0.14 G3-Alliance - Performance Test Suite Specification - v0.27 G3-Certification Test Procedures version 6.02 | | |
| Date of sample receipt: <i>Wareneingangsdatum:</i> | 2024-02-16 |  | |
| Test sample no.: <i>Prüfmuster-Nr.:</i> | A003660487-003 | | |
| Testing period: <i>Prüfzeitraum:</i> | 2024-02-21 - 2024-02-23 | | |
| Place of testing: <i>Ort der Prüfung:</i> | 4-25-2 Kita-Yamata, Tsuzuki-ku Yokohama 224-0021, Japan | | |
| Testing laboratory: <i>Prüflaboratorium:</i> | TÜV Rheinland Japan Ltd. | | |
| Test result*: <i>Prüfergebnis*:</i> | Pass | | |
| tested by: <i>geprüft von:</i> |  Martin Zietz | | |
| Date: 2024-03-02 <i>Datum:</i> | | Issue date: 2024-03-04 <i>Ausstellungsdatum:</i> | |
| Position / Stellung: | Tester | Position / Stellung: | Reviewer |
| Other: <i>Sonstiges:</i> | | | |
| Condition of the test item at delivery: <i>Zustand des Prüfgegenstandes bei Anlieferung:</i> | | Test item complete and undamaged Prüfmuster vollständig und unbeschädigt | |
| * Legend: P(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test specification(s) N/A = not applicable N/T = not tested * Legende: P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet | | | |
| This test report only relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark. <i>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.</i> | | | |
| TÜV Rheinland Japan Ltd., Global Technology Assessment Center 4-25-2 Kita-Yamata, Tsuzuki-ku Yokohama 224-0021, Japan Mail: g3plc@tuv.com · Web: www.tuv.com/ | | | |