**Declaration of Czech according to EN 50549-1**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Model** | | GW15K-ET、GW20K-ET、GW25K-ET、GW29.9K-ET、GW30K-ET | | | | | | | |
| **Type** | | Hybrid Inverter | | | | | | | |
| **Manufacturer** | | GoodWe Technologies Co., Ltd. | | | | | | | |
| **Address** | | No.90 Zijin Rd., New District, Suzhou, 215011, P.R. China | | | | | | | |
| **Tel** | | +86 512 6239 7998 | | | | | | | |
| **E-mail address** | | service@goodwe.com | | | | | | | |
| **Reference standard** | | PPDS  2022   Type A2/B1 | | | | | | | |
| **Czech Republic settings as described in the table below:** | | | | | | | | | |
| **Protection settings** | | | | **Protection parameter** | | | | | **Unit** |
| Gird Setting | | | | 230V，50Hz | | | | | phase |
| **[Voltage protection](javascript:;)** | | | | | | | | | |
| Under voltage threshold stage 1 | | | | 161 | | | | | V |
| Under voltage operate time stage 1 | | | | 0 ~2.7 | | | | | s |
| Under voltage threshold stage 2 | | | | 103.5 | | | | | V |
| Under voltage operate time stage 2 | | | | ≥0.15 | | | | | s |
| Over voltage threshold stage 1 | | | | 276 | | | | | V |
| Over voltage operate time stage 1 | | | | 5 | | | | | s |
| Over voltage threshold stage 2 | | | | 287.5 | | | | | V |
| Over voltage operate time stage 2 | | | | 0.1 | | | | | s |
| Over voltage 10min mean threshold | | | | 264.5 | | | | | V |
| **Frequency protection** | | | | | | | | | |
| Under frequency threshold | | | | 47.5 | | | | | Hz |
| Under frequency operate time | | | | ≤0.1 | | | | | s |
| Over frequency threshold | | | | 51.5 | | | | | Hz |
| Over frequency operate time | | | | ≤0.1 | | | | | s |
| **Reconnection** | | | | | | | | | |
| Lower frequency | | | | 47.5 | | | | | Hz |
| Upper frequency | | | | 50.05 | | | | | Hz |
| Lower voltage | | | | 195.5 | | | | | V |
| Upper voltage | | | | 253 | | | | | V |
| Observation time | | | | ≥ 300 | | | | | s |
| Active power increase gradient | | | | ≤ 10 % | | | | | Pn/min |
| **Startup** | | | | | | | | | |
| Lower frequency threshold | | | | 49.5 | | | | | Hz |
| Upper frequency threshold | | | | 50.5 | | | | | Hz |
| Lower voltage threshold | | | | 207 | | | | | V |
| Upper voltage threshold | | | | 253 | | | | | V |
| **Cos φ (U)** | | | | X1 | X2 | X3 | | X4 | / |
| 94% | 97% | 105% | | 108% | U/Un |
| 0.9 | 1 | 1 | | -0.9 | PF |
| **Island protection** | | | | 2 | | | | | s |
| **LVRT Voltage-Time-Diagram** | | | | Time [s] | | U [p.u.] | | | / |
| 0.0 | | 0.05 | | | / |
| 0.15 | | 0.05 | | | / |
| 3 | | 0.85 | | | / |
| **Curve setting**  Function P(U) and Q(U) according PPDS 2022 pr.c.4, section 9.3.5 and 9.4.2 .The default values are as written below. | | | | | | | | | |
| P(U)  U1/Un =109%；U2/Un =110%；U3/Un =111%； | | | | | | | | | |
| Q(U)  X1 = 0.94；X2 = 0.97；X3 = 1.05；X4 = 1.08 | | | | | | | | | |
| The inverters are able to follow the above-mentioned required functions, and other default parameters are according to EN50549-1 for Type A2 and EN50549-1&-2 for Type B1.  This declaration applies to all products from listed product series.  This declaration loses its validity if the device is modified or incorrectly connected.  This declaration certifies the compliance with the mentioned regulations but does not ensure the properties. The safety instructions in the product documentation provided must be observed! | | | | | | | | | |
| **Signed** |  | | **Data** | | | | 2023/02/28 | | |