ENPHASE.

TECHNICAL BRIEF

# Installation of an §14a EnWG compliant system

**Applicable regions: Germany**

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# 1. Overview

With the amendment to §14a of the Energy Industry Act (EnWG), the legislator has created a binding framework for the grid-stability-related control of controllable consumption devices by distribution system operators (DSOs). These include heat pumps, EVSEs, and stationary battery storage systems, provided they meet certain connection requirements.

# 2. The role of the FNN control box

A key element in this context is the control box compliant with the FNN recommendation (FNN control box) – a standardized device for signalling control commands from the DSO through a safe and secure communication path. This FNN control box can communicate with controllable consumption devices either through a galvanically isolated switching signal (potential-free contact), which must be forwarded to a suitable interface of the controllable consumption device, or alternatively, the FNN control box can employ a higher-level protocol building on TCP/IP-based communication, like EEBus or KNX.

# 3. Enphase solution

Enphase Energy Systems and Enphase EVSEs are designed to comply with §14a EnWG. When the FNN control box sends a signal, the system can automatically limit the charging power of the connected Enphase devices.

- The control signal for limiting storage charging power to 4.2 kW is transmitted by a dry contact state on the FNN control box. This relay output (W4) is wired to digital input 4 on the IQ Gateway.


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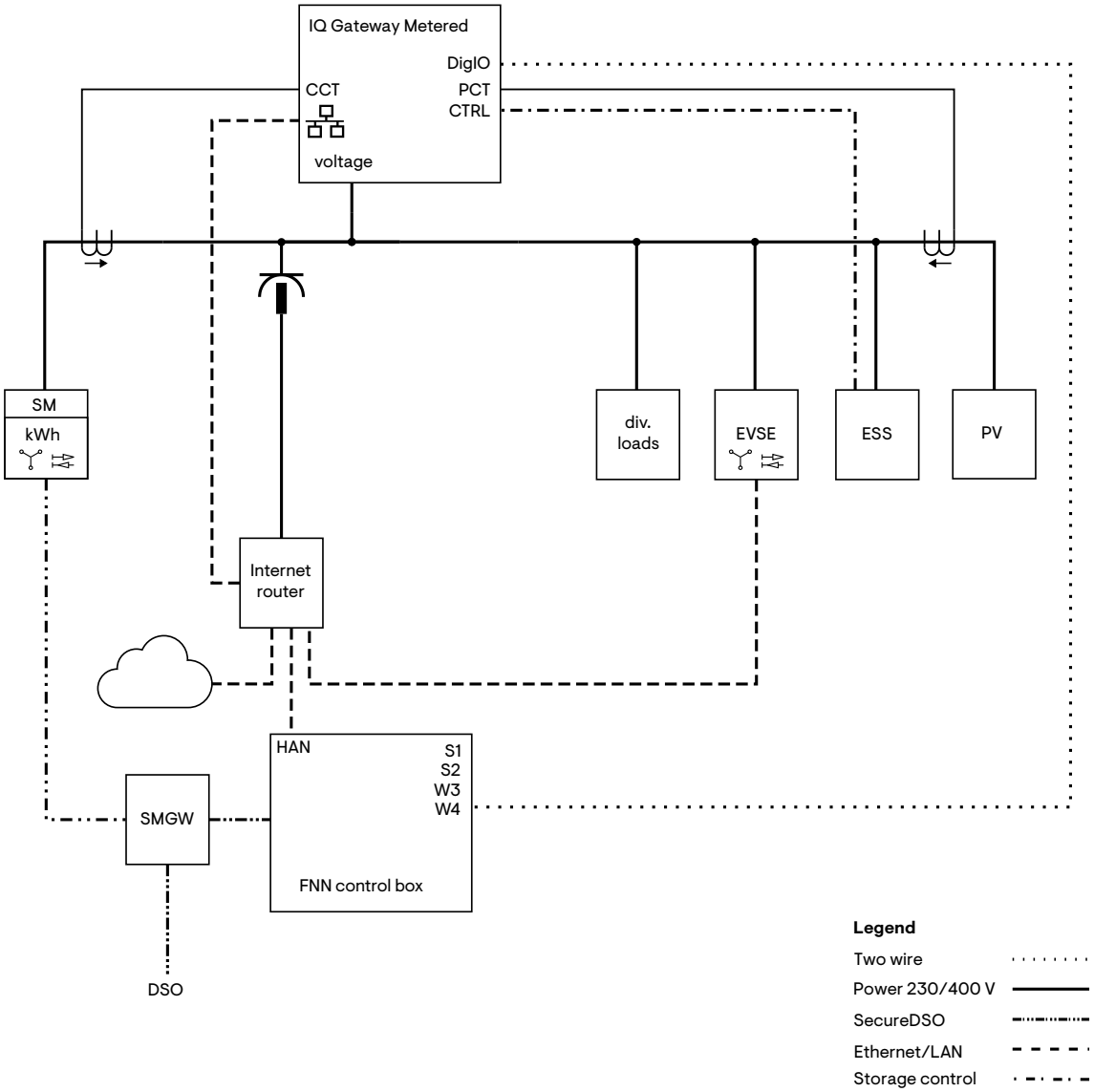
- The control signal for limiting EVSE charging power to max. 4.2 kW is passed to the EVSE through the EEBus interface on the facility's LAN.




**Abbreviations**

| | | | |
|---|---|---|---|
| CCT | Consumption CT(s) | HAN | Home area network |
| PCT | Production CT(s) | EVSE | Electrical vehicle supply equipement or wallbox |
| CTRL | Communication to IQ Batteries (via Communications Kit) | ESS | Energy storage system |
| SM | Sart meter | S1, S2 | Normally open (NO) dry contacts |
| SMGW | Smart meter gateway | W3, W4 | Change-over dry contacts |
| div. loads | Diverse uncontrolled loads/devices | PV | Photovoltaic system |
| DSO | Distribution system operator | | |

*Figure 1: Enphase Energy System (PV with Storage (ESS)) SLD with controllable devices (storage (ESS), EVSE ), smart meter (SM), smart meter gateway (SMGW), and FNN control box.*

**NOTE:** In the example, the storage system is controlled through the W4 dry contact on the FNN control box, and the Enphase EVSE is controlled through the EEBus interface on the FNN control box. The PV system can be controlled through the FNN control box by utilizing the dry contacts S1, S2 and W3 as well (see: https://enphase.com/de-de/download/massnahmen-zur-einhaltung-des-solarspitzengesetzes-eeg-2025-ss9).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# 4. Installation

## 4.1 Storage

### Prerequisite

The metering point operator has configured the FNN control box to transmit a storage charge power limit (default: 4.2 kW) to the IQ Gateway Metered through the potential-free contact W4.

Enabling PV control through the FNN control box is not within the scope of this technical brief. For PV control through the dry contacts on the FNN control box see: https://enphase.com/de-de/download/massnahmen-zur-einhaltung-des-solarspitzengesetzes-eeg-2025-ss9.

### Installation

Two wires must be connected from the W4 contact on the control box (configured as either NO or NC, depending on the metering point operator's setup) to the IQ Gateway: one to the communication terminal, one to digital input 4.

**NOTE:** The factory-installed 15 kΩ resistor on the IQ Gateway Metered must not be removed. If the resistor is removed, PV and Storage components will be powered down.

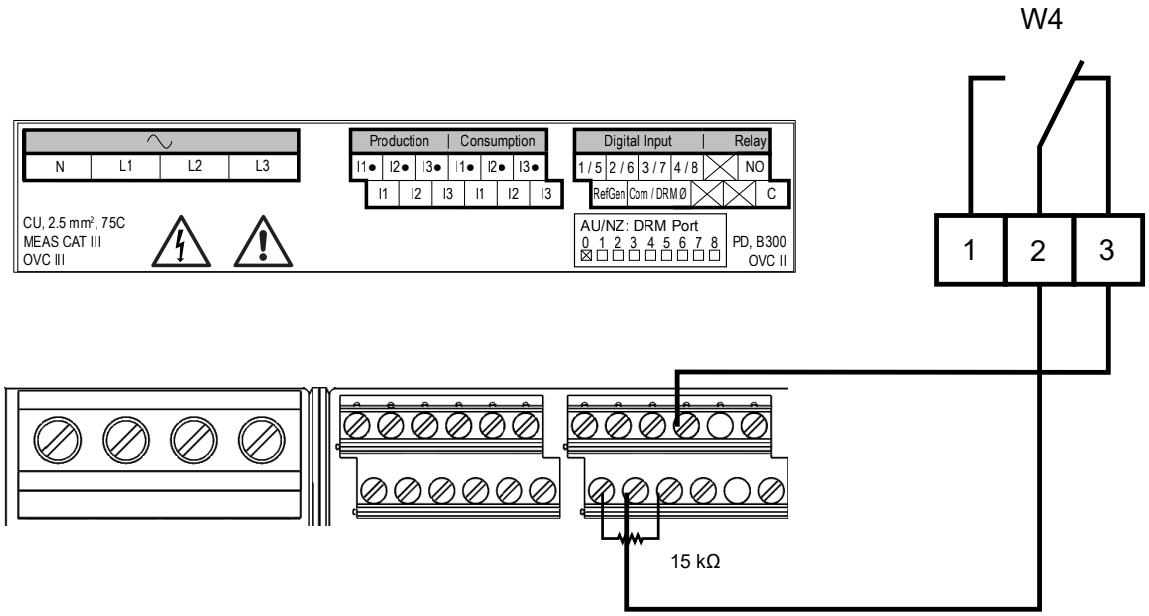


*Figure 2: Concept C in interface on a controllable device or energy management system for connection to an FNN control box (VDE FNN) – NC contact.*


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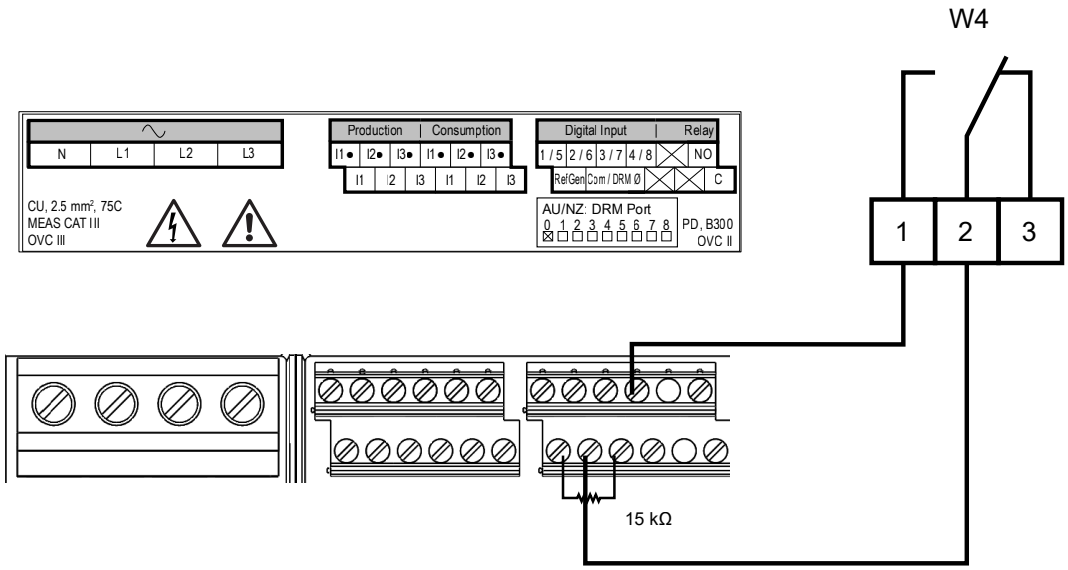


*Figure 3: Concept C in interface on a controllable device or energy management system for connection to an FNN control box (VDE FNN) – NO contact.*

## 4.2 EVSE

**Prerequisite:** The metering point operator has configured the FNN control box to transmit an EV charge power limit to the IQ EVSE through the FNN control box's EEBus interface, that is, employing the limitation of power consumption (LPC) use case.

**Installation:** The EVSE must be connected to the facility's LAN with Ethernet cabling.

## 4.3 Configuration

The configuration of the DigIO (for storage control) is (and soon the EEBus/KNX interface (for EVSE control) will be) possible during commissioning in the Enphase Installer App and after installation in the system activation form in the Enphase Installer Portal.

### 4.3.1 Configuring the storage control via the digital inputs on the IQ Gateway Metered

In the **Checks and Configuration** view of Step 2 of the commissioning workflow in the Enphase Installer App, select the **Power Control for EnWG §14a** checkbox, and then click **Next: Start Configuration**.


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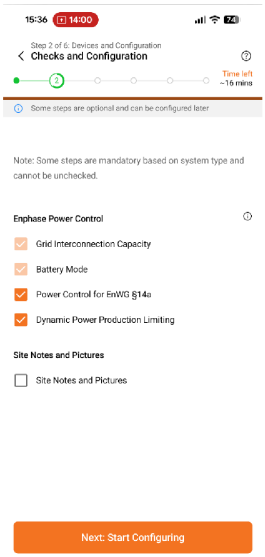
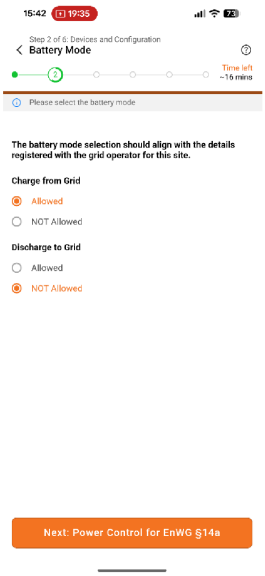



In the **Battery Mode** section, select **Allowed** under **Charge from Grid.** (Selecting **NOT Allowed** under **Discharge from Grid** will render all subsequent settings of the EnWG §14 feature ineffective.) Click on **Next: Power Control for EnWG §14a.**




Select **Yes** to the question **Do you want to limit battery charging using an FNN control box for EnWG §14a?**. Indicate whether the dry contact wired to the four digital inputs on the IQ Gateway Metered is wired in a **Normally Open (NO)** or **Normally Closed (NC)** dry contact (on the FNN control box). Indicate which dry contact is being used on the FNN control box (for completeness' sake). Click on **Done.**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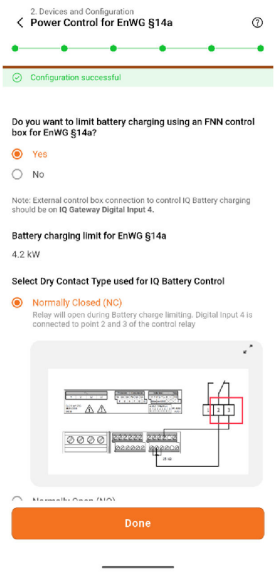


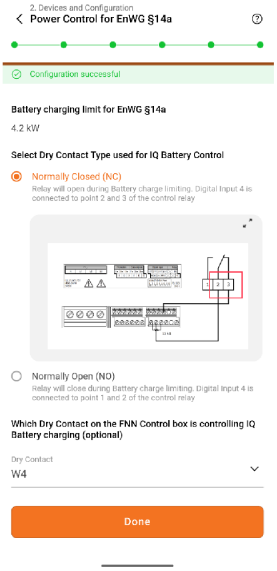


# 5. Revision history

| Revision | Date | Description |
|---|---|---|
| TEB-00316-2.0 | March 2026 | Updated the "Configuration" section. |
| TEB-00316-1.0 | July 2025 | Initial release. |


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