



Flexible Power outstation interface manual

16 February 2018

Introduction

As part of the trial, Flexible Power must send and receive signal to and from customers. There are two options for the connection method between participants and Flexible Power, via an API or via on-site hardware: the Outstation. It is expected that the API will be the favoured mechanism, particularly in circumstances where there are multiple sites, multiple assets or via a third party.

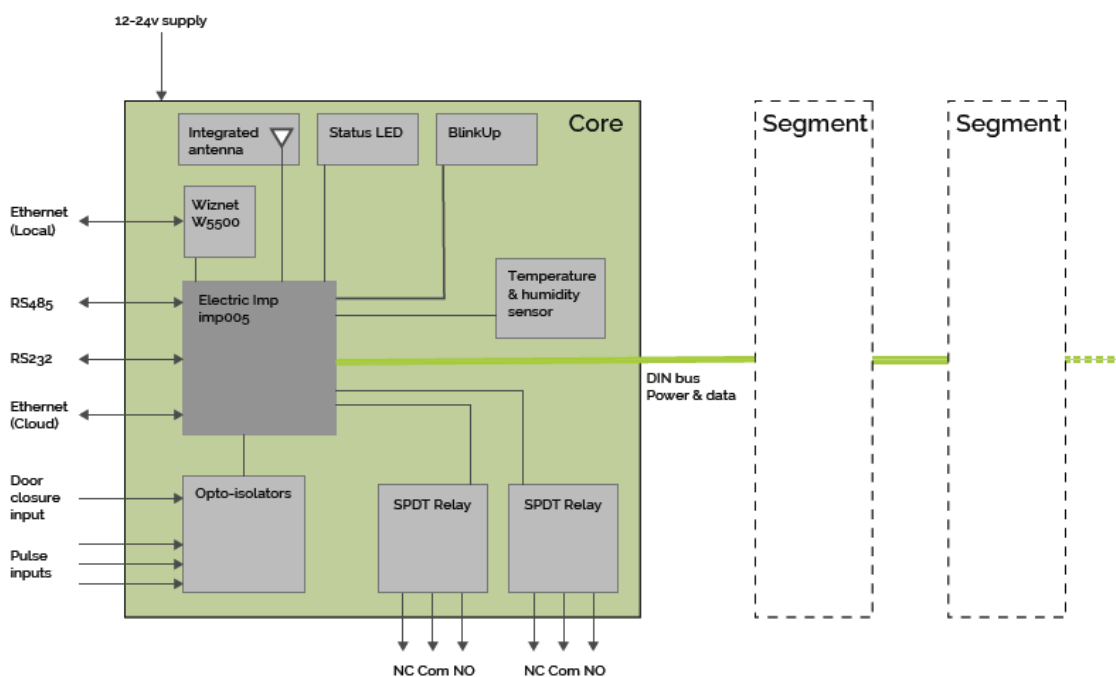
This document covers the interfacing options with the Outstation. The API option is covered in document FP API 01.

Outstation Overview

The Outstation allows for interfacing with the trial via on-site hardware. It allows for the dispatch and metering of an asset(s) and involves two way data flows.

The signals to the asset cover the dispatch, informing both the starting and the stopping of the service. There are also 2 signals coming from the asset to Flexible Power. The first is the metering signal, providing minute by minute data in kW for each programme and each zone. This allows Flexible Power to monitor and ultimately bill the customer. The second signal is an emergency stop / withdrawal from service, to inform Flexible Power of last minute circumstances that limit the delivery of DSR capability.

The Outstation is a DIN-rail mounted, hardware device that is independently powered and facilitates communication with the Flexible Power Central Control Facility. This is a highly adaptable processing station allowing for connections across a range of connection types and protocols. The core unit can also be supplemented to allow for more advanced I/O options or a metering unit.



Due to the wide range of connection options available and the diversity of on site requirements, site specific discussions will be needed with Flexible Power to detail the most effective connection option.

If you would like to investigate interfacing via an outstation please do not hesitate to get in contact with the Flexible Power team at;

FlexiblePower@westernpower.co.uk

Outstation installation and testing

Following the site specific installation discussions, Flexible Power will provide the participant with installation instructions as well as site specific configuration requirements.

The participant will then install the outstation as per the instructions.

Once the outstation is connected to the asset(s) at a participating site, Flexible Power will carry out basic testing in conjunction with participants appointed installers to ensure full communication to site is available. This testing does not require the direct response of assets, but is simply to test the presentation of the signals to site.

The test will include:

- The collection of reliable metering data for 30 minutes
- Receive a start signal
- Send an emergency stop signal for the service.
- Receive a start signal
- Receive a stop signal