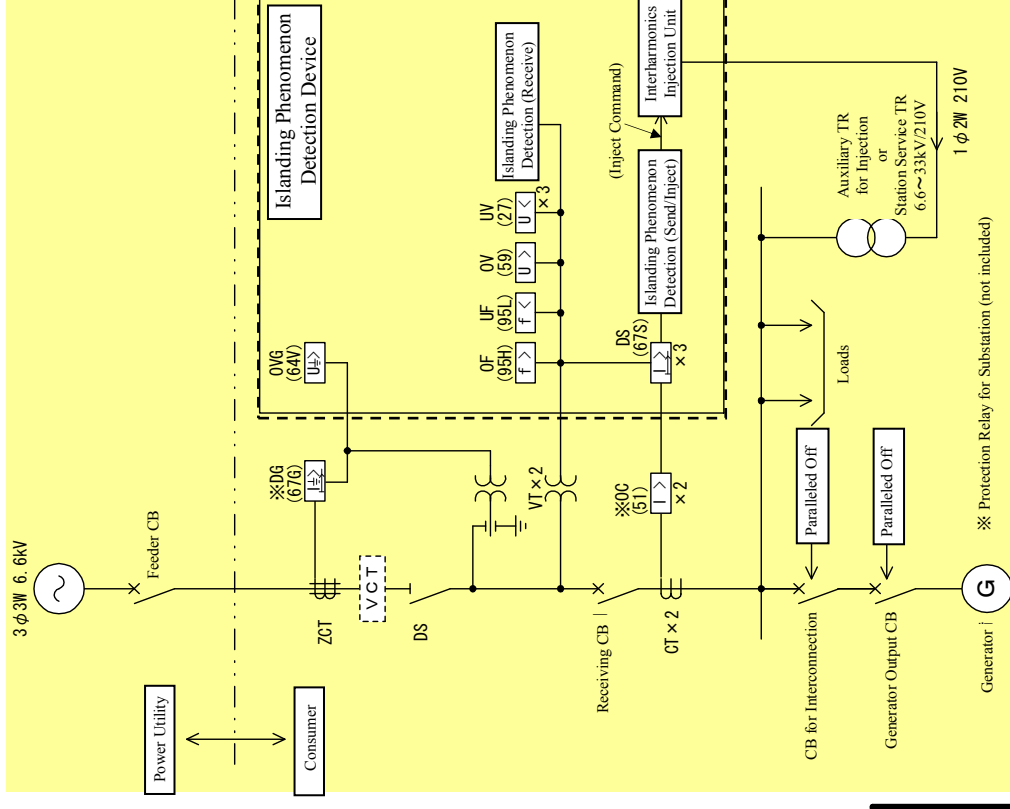
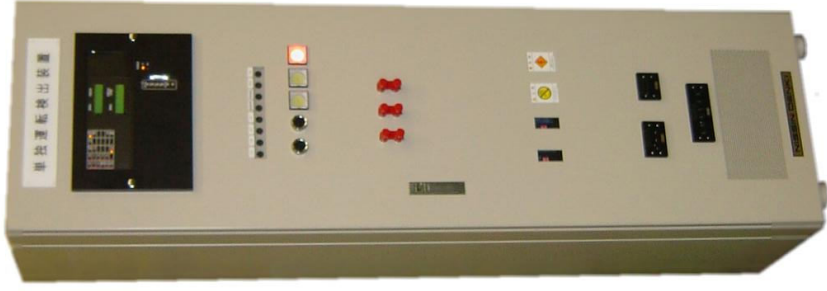


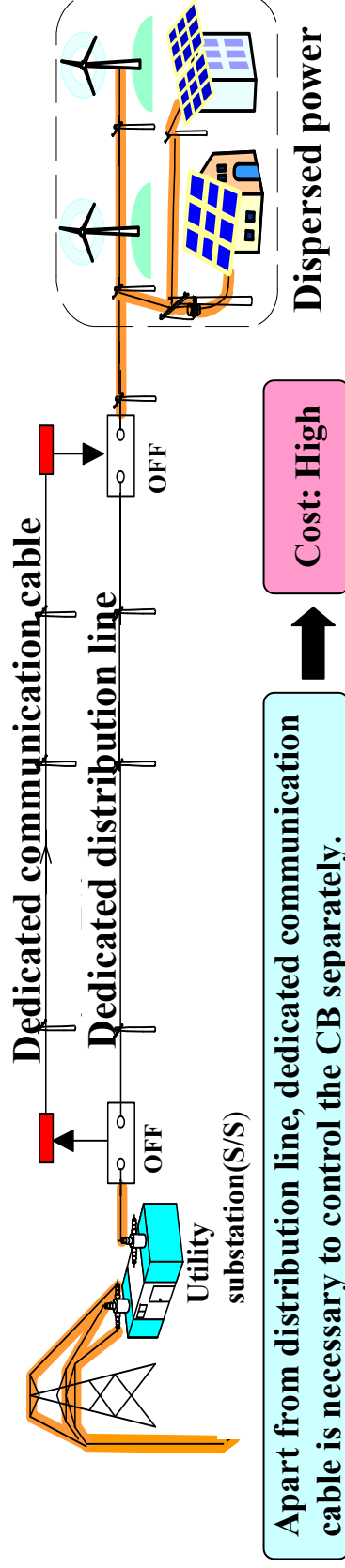
NISSIN Islanding Phenomenon Detecting Device



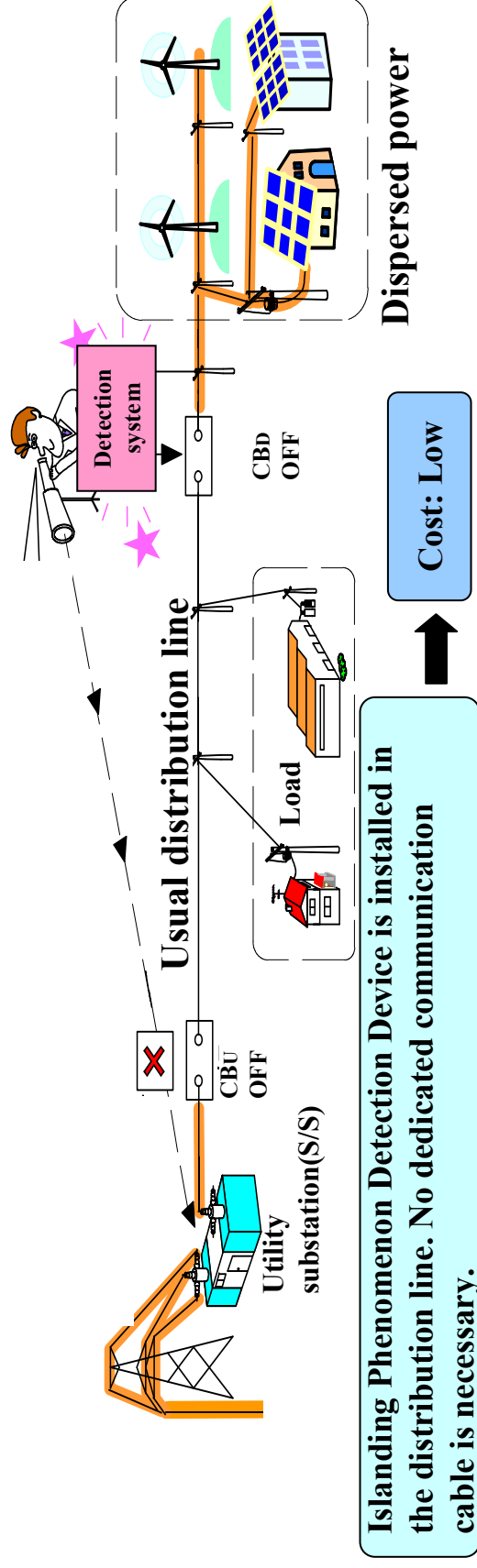
Dimensions	(W)500 x (H)1,760 x (D) 400 mm
Weight	210kg

2 Major Systems to Protect the Power Grid from Islanding phenomenon

1. Transfer Tripping System



2. Islanding Phenomenon Detection System



Problems of Transfer Tripping System and Conventional Islanding Phenomenon Detection System

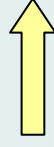
System		Problem
Conventional Islanding Phenomenon Detection System	Transfer Tripping System	<ul style="list-style-type: none"> · High cost due to the dedicated communication cable
	Reactive Power Variation (Compensation) Method	<ul style="list-style-type: none"> · Slow detection time
	Load Variation Method	<ul style="list-style-type: none"> · When more than 2 devices are applied in the system; <ol style="list-style-type: none"> (1) Low reliability due to the mutual interference (2) Occurrence of voltage variation (flicker, etc.)
	QC Mode Frequency Shifting Method	

Nissin's Detection Device is ideal solution to the above problems!!

Features of Nissin Islanding Phenomenon Detecting Device

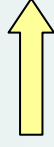
Nissin's device detects the Islanding Phenomenon by continuous injection of interharmonics.

No Voltage Fluctuation



Negligible Effect on Utility's Grid

12 Channels of Interharmonics



More than 2 devices can be applied

Continuous Injection

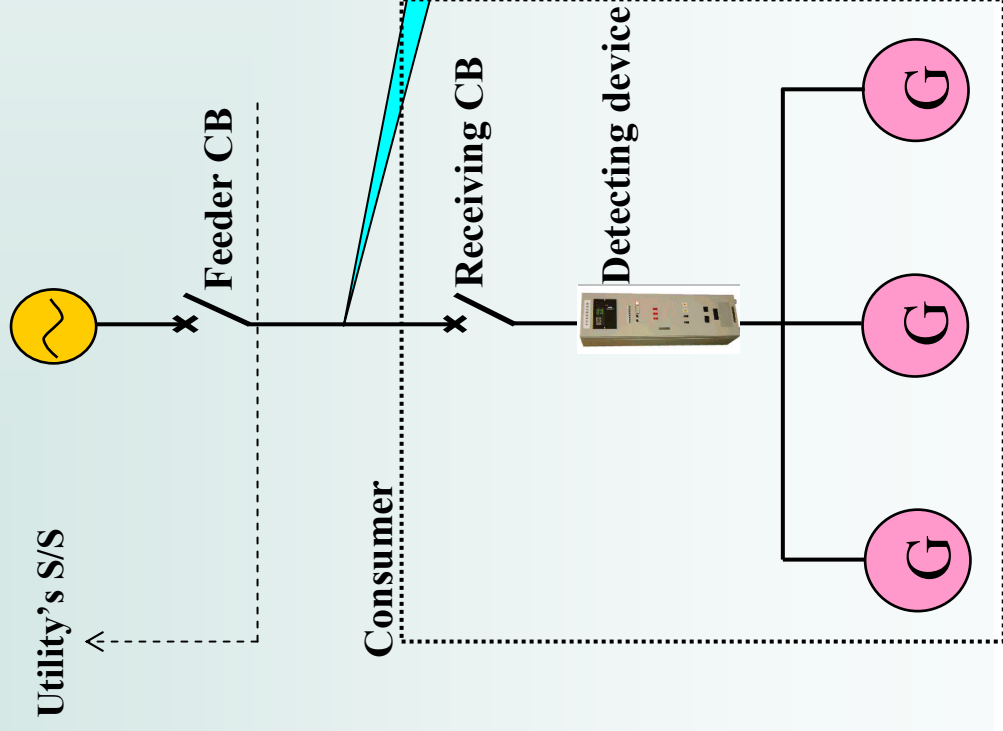


Quick Detection (Approx. 1 sec.)

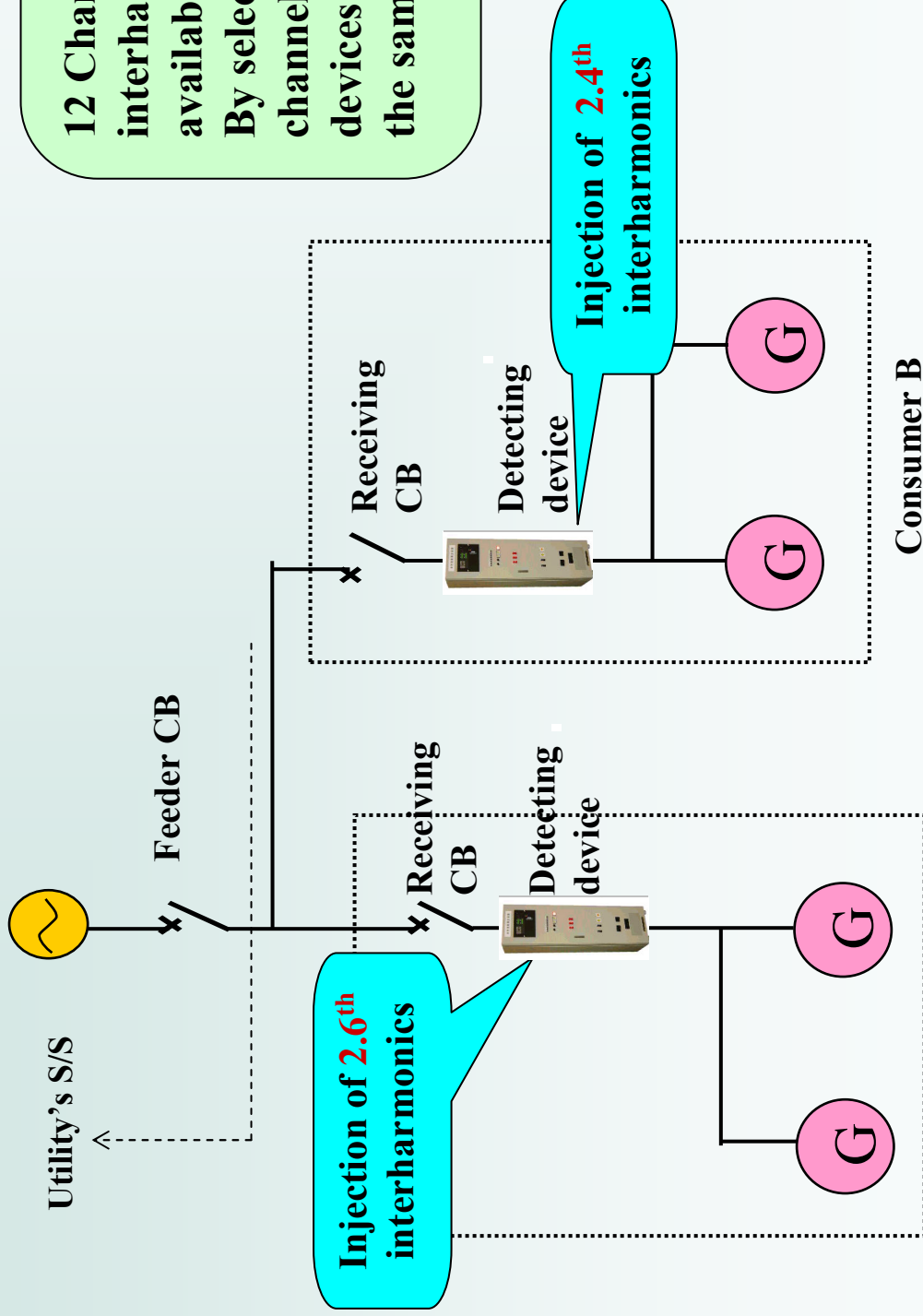


Negligible Effect on Utility's Grid

Voltage distortion factor on the Utility's Grid side is approx. 0.1% only.
* Japanese Guideline: Not more than 5%



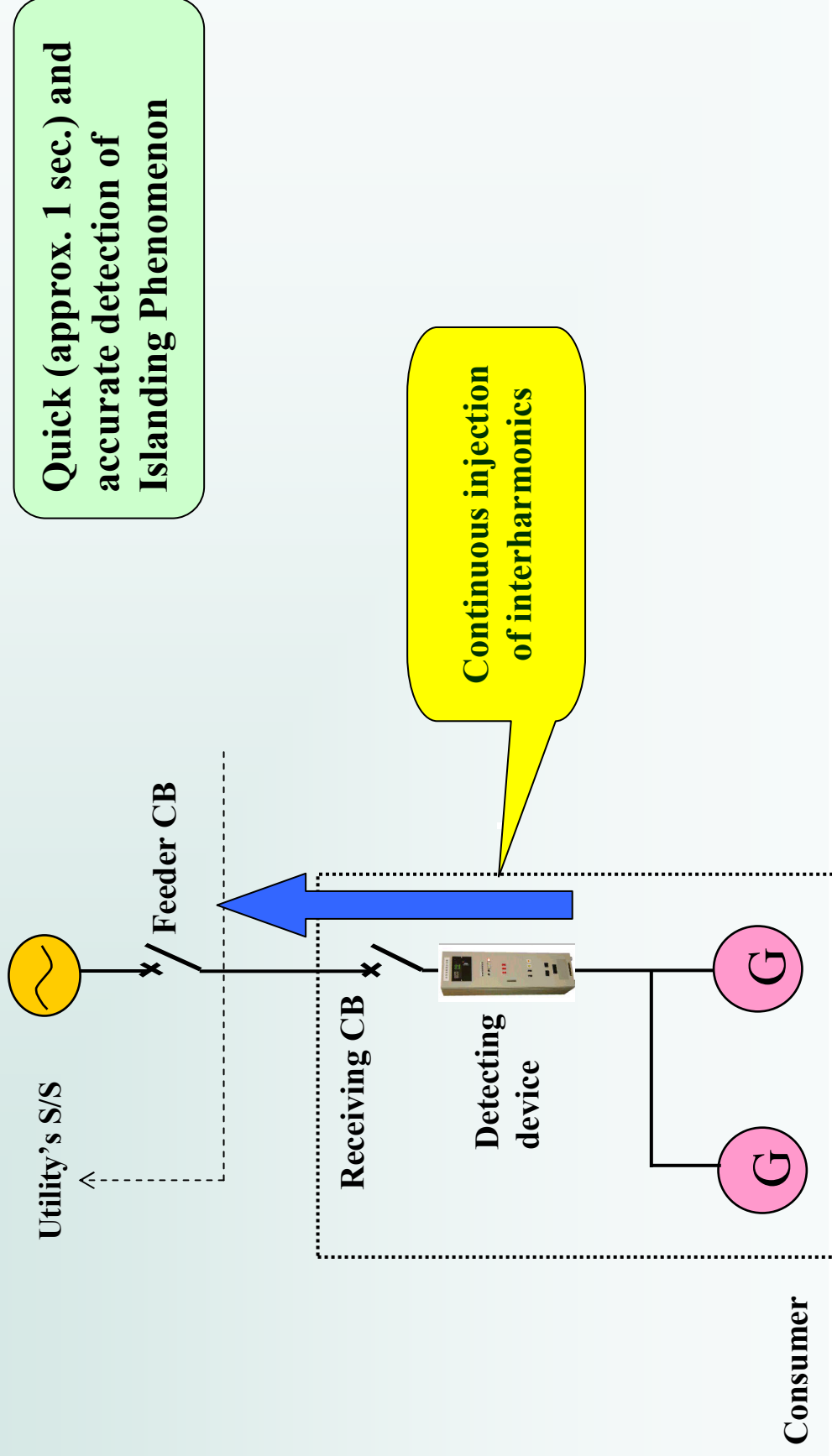
More than 2 devices can be applied in the System



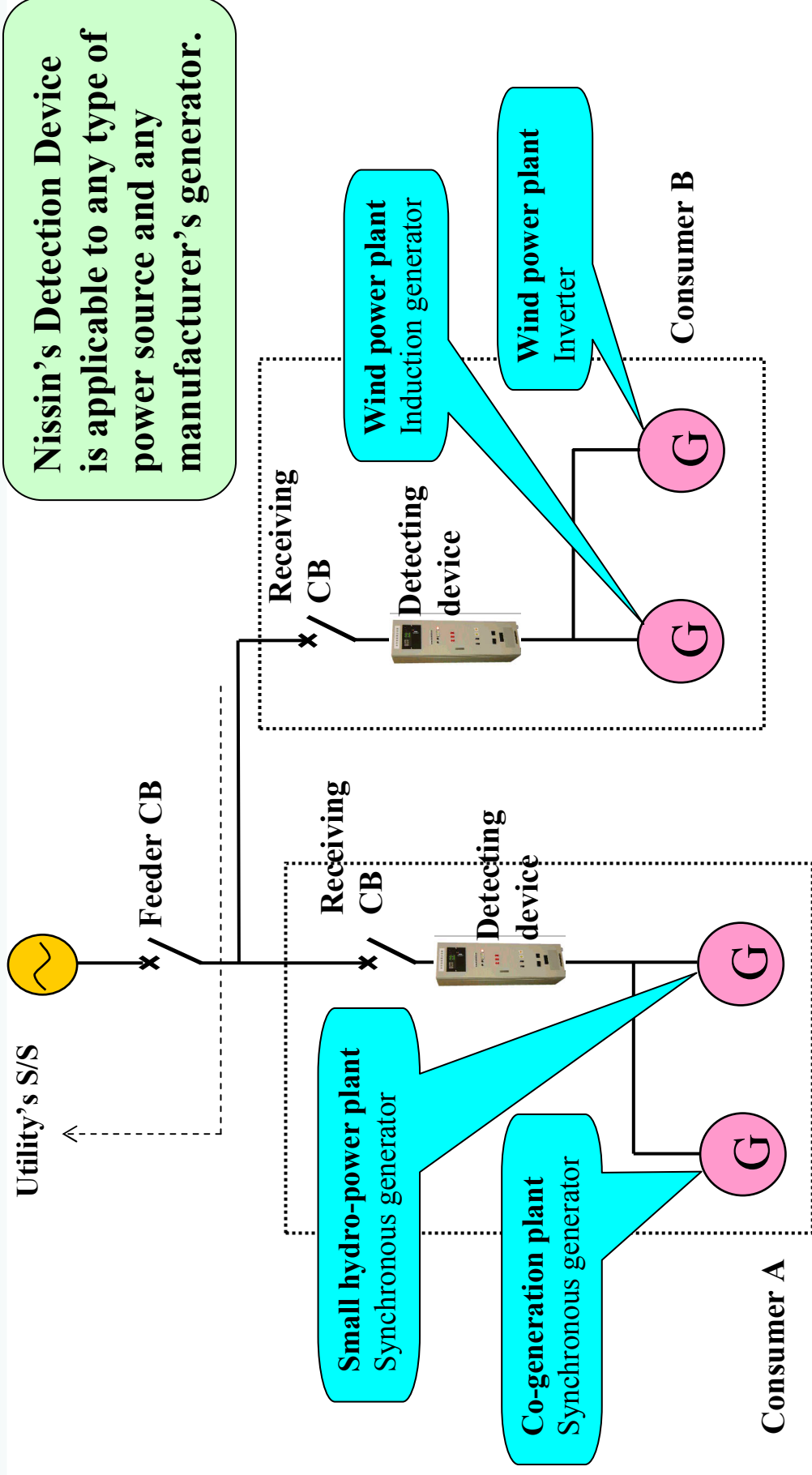
12 Channels of interharmonics are available.
By selecting different channel, more than 2 devices can be applied in the same feeder.

Islanding Phenomenon Detection System

Quick Detection



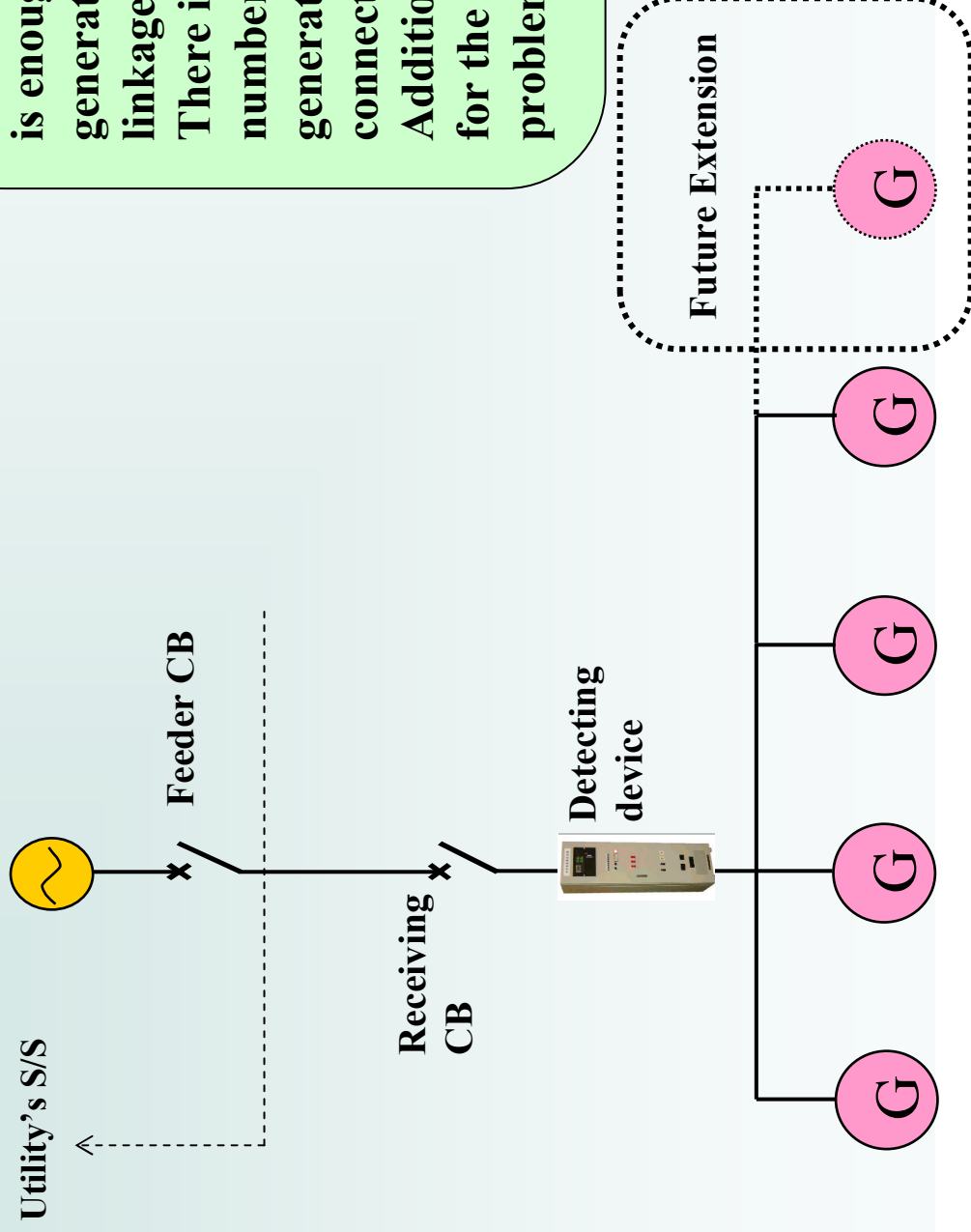
Applicable to any type of Power Source










Nissin's Detection Device is applicable to any type of power source and any manufacturer's generator.

No Limit to the Number of Generators

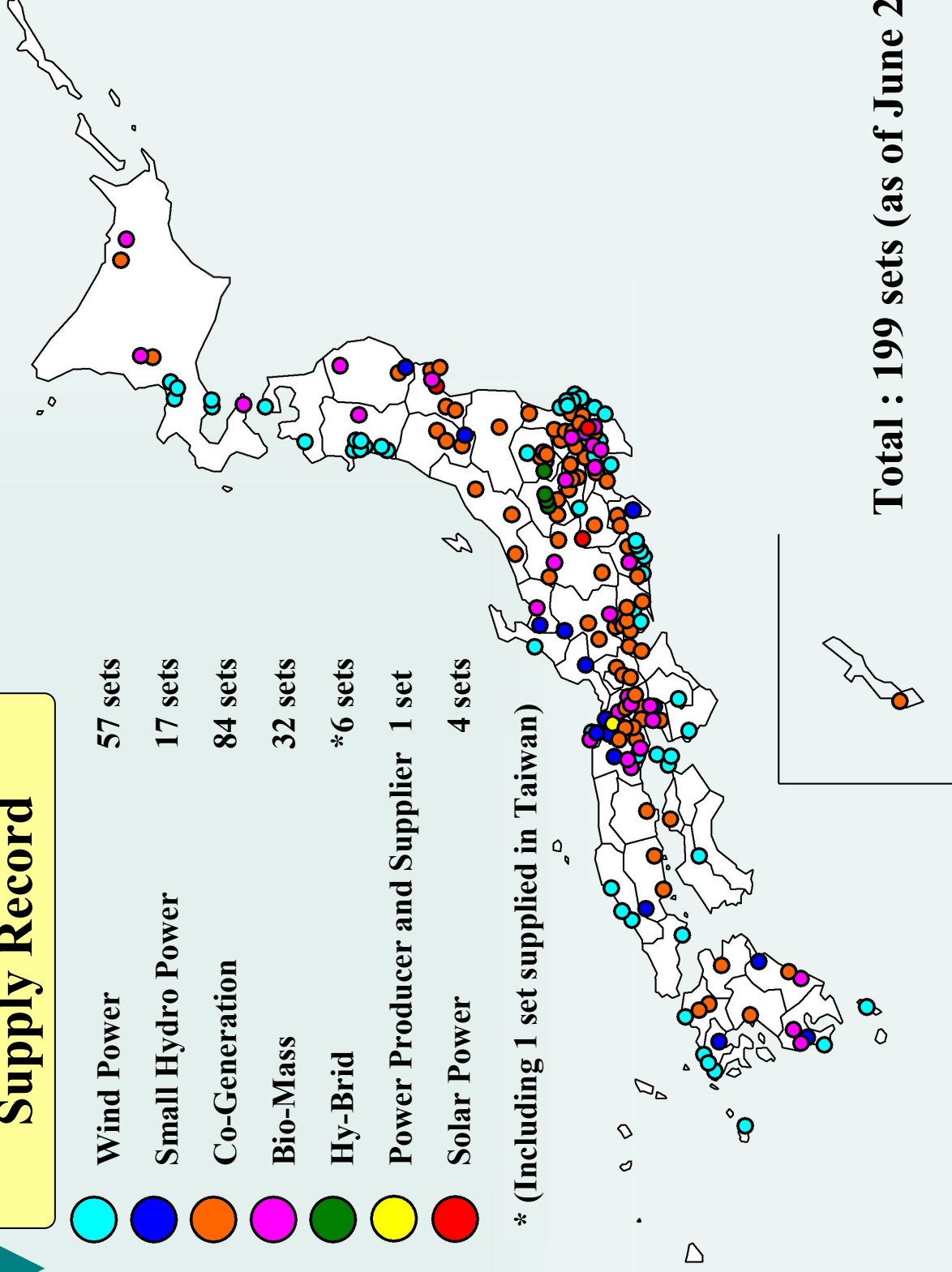
Only 1 Detecting Device is enough to cover all generators installed in 1 linkage. There is no limit on the number of the power generators to be connected to the device. Addition of generators for the extension is no problem.



Supply Record

	Wind Power	57 sets
	Small Hydro Power	17 sets
	Co-Generation	84 sets
	Bio-Mass	32 sets
	Hy-Brid	*6 sets
	Power Producer and Supplier	1 set
	Solar Power	4 sets

* (Including 1 set supplied in Taiwan)



Total : 199 sets (as of June 2012)