

3N800PFC automatic constant feeding system Device and work principle



3N-PFC multi-access($1 \sim 16$)static automatic constant feeding system



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1. 3N800PFC work principle

See attachment diagram.

Load vibrator B loads materials from silo A into the bucket C. Increasing materials checked by high precise load cell. After be calculated by 3NSAC0152, this varies signal is sent to 3N800 controller.. In 3N800 controller, this electrical signal is calculated into a weight with a standard unit (Kg, ton, Lb). So the controller measures the weight of loaded materials in bucket and compare with pre-set target. As soon as the weight is up to target, load vibrator stops. The controller sends a discharge signal to XK35PC executor. The executor drives electromagnet F to open discharging gate and to let the materials out. This procedure repeats.

There is a compensation algorithm in the control system. It automatically correct the discharging weight in every cycle in case of error occurs. That makes a high precise weighing and feeding.

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2. Device Description

- 2.1 A 3N800 can control $1 \sim 16$ bucket scale at same time.
- 2.2 Every bucket scale includes (probably more than one scale in one system):
 - 1 Load vibrator (for powder material, it is screw feeder)
 - 1 bucket scale
 - $1 \sim 3$ Load cells
 - 1 wiring box (Not necessary in some cases)
 - 1 3NSC0152 unit
 - 1 3NXK35PC unit
 - 35 meters of Shielded cable
 - 1 accessories assembly
- 2.3 3N800 controller includes (for one system):
 - 1 3N800 host (Chinese/English)
 - 1 LCD monitor
 - 1 waterproof keyboard KBD70A
 - 1 control cabinet and console
- 2.4 Safeguard Grade:
 - Control cabinet: IP54.

Load cell: 3NSAC0152, KBD70A: IP65.

2.5 The capacity of the vibrator and bucket scale are determined according user requirement. The data below need from users:

- A: To every kind of materials, the normally flow (ton per hour) and characteristic (granularity).
- B: How many kind of materials, and in nature, the weight per stere (unit: t/m^3)
- 2.6 Precision: $\pm 0.5\%$

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2.7 The capacity of one scale: $0.1t/h \sim 300t/h$

Notice: Not allow the electromagnet piece to be connected overtime. That will be overheat and damage.







