HDC-P1 Elevator Load Weighing Device introdtion manual V2.2

- **This system is applicable to all elevators with movable car platform in need of overload signals.** This device is of extremely high performance-price ratio. This appliance is to overcome the inherent disadvantage of the mechanical overload switch and to replace it.
- **Main Property:**
  1. Working in a contact less and inductive way. No mechanical movement itself. Being directly installed in the original place of overload switch. No necessity of changing the mechanism of elevator car.
  2. Adopting strong inductive magnet, improving the anti-interference of the system to the utmost.
  3. The electrical property is in compliance with the standard of the International Electromechanical Commission (IEC).
  4. More accurately positioning, small overall size, easy installation and adjustment, simple structure and low price.
- **Technical Specification:**

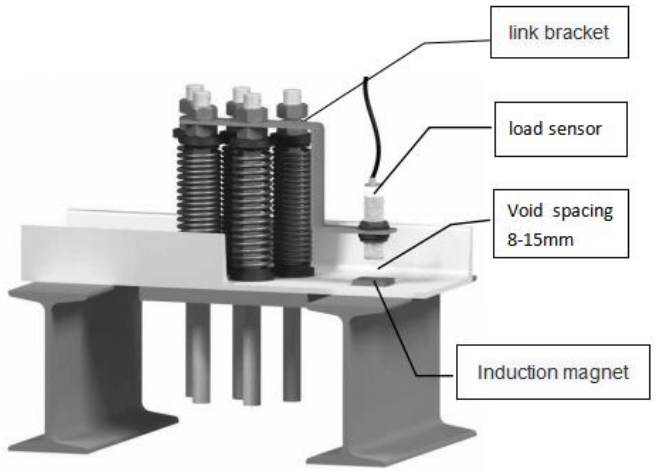
1.	Application Range	Applicable to all elevators with movable car platform in need of overload signal with a inspection clearance of 8～15 ㎜.
2	Sensitivity	Overload turning point≤Rated load adjusting point±0.05 ㎜
3	System Error	≤1.5% (5～40℃)
4	Output Mode	1 pair of relay dynamic **CLOSE** or dynamic **OPEN** contacts respectively with the capacity of DC/AC 48V/500mA.
5	Operation Ambient Temperature	-25～55℃
6	Power Supply	AC/DC 24V(±10%)/15mA. The operating current of the whole machine≤100 mA.
7	Install Position	Movable elevator car platform
8	Overall Size	Column of Φ24×83 mm

- **Working Principle:**

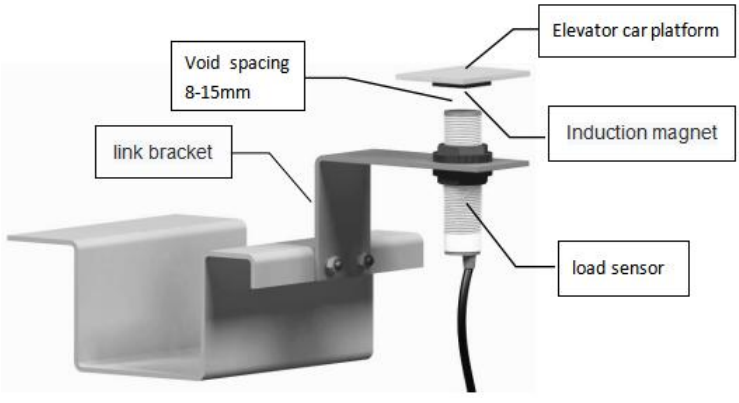
This system weighs the elevator car load based on the principle of the elastic deformation of movable elevator car platform caused by loading with the HALL sensor measuring the change of displacement, fulfilling the aim of load weighing.

- **Installing Method:**

Car platform installation diagram



Traction rope head installation diagram



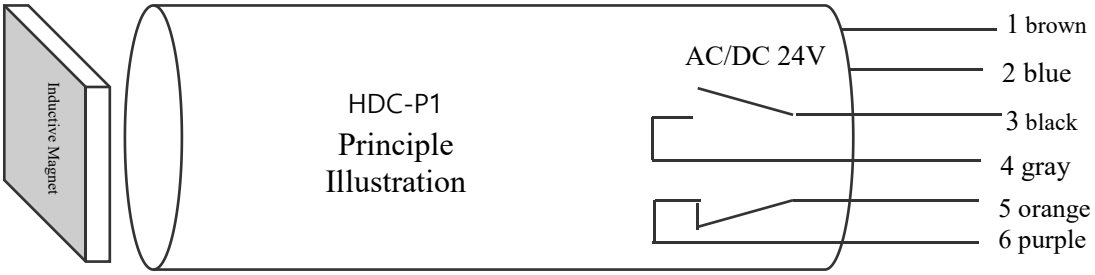
Note:The system connection bracket requires the user to make it according to the specifie situation.

● Adjustment

1. Please refer to the above figure to install this device with the connecting support (made by the customer himself) close to the middle part of the car platform as near as possible.
2. Let the magnet adhesive on the car platform with the marking-face right facing the induction point of the device.
3. Install and adjust this device so that the magnet on the car platform aims at the center point of its upper face. Meanwhile, assure the end face of this device in parallel with that of the magnet.
4. When elevator is of rated loaded, adjust this device up and down to make the indicator just turn from dark to bright (or oscillating), at this time, fasten this device and the adjustment is finished.

● The principle of system wiring:

Wire	Function	Explanation
Brown, Blue	System Operating Power	Operating Power AC/DC24V(±10%)/100mA
Black, Gray	Overloading relay dynamic **Close** contact	Contact Capacity: DC/AC 48V/500mA
Orange, Purple	Overloading relay dynamic **Open** contact	



● Comparison of the functions with other load weighing devices

	HDC-P1	**Mechanical overloading switch**
Working Principle	By the use of Hall sensor, the working way of contactless induction is realized. Advantages： ① The system doesn't bear the elevator load directly, extending its life. ② Overloading signal is of point turning to position more accurately. ③ No system damage caused by the insufficiency of overloading competence or mechanical vibration.	Directly bearing the effect and impact of elevator load, unstable and damageable.
Installing and adjusting	Just adjust the system up and down so that the indicator will turn from dark to bright. At the turning point, fasten this device well.	Field adjustment is complicated.
Output signal	A pair of relay dynamic **Close** and **Open** contacts respectively.	Single function