Prospect DTZZIII Controller
(DTZZIII-D-1X)

Instruction Manual

Qinhuangdao Development Zone Prospect

Photoelectric Tech. Co., Ltd.

一、Technology Parameter

Type	D-1X/ D-1X-1	D-1X-2	D-1X-3/D-1X-4/D-1X-6	D-1X-8/ D-1X-9
Main charateristic	1.Relay contact 2. Overload（102%） Full-load（95%）	1.Relay contact 2. Overload（125%） Full-load（100%）	1.Relay contact 2. Overload（102%） Full-load（95%）	1.Relay contact 2. Overload（102%） Full-load（95%） Light-load（10%）
Technology Parameter	Power Source	DC24（-15~+10%）V		
	Precision	1.0 class		
	Sensitivity	＜0.1 %		
	Control return	＜1 %		
	Working temperature	－10 ～ 60℃		
	Power consumption of	＜10 W		
	Overload capacity of	150 %		
	Output contactor capacity	0.3A/DC24V； 0.3A/AC220V		

二、The External Mechanical Dimension of the controller and the definition of Terminal

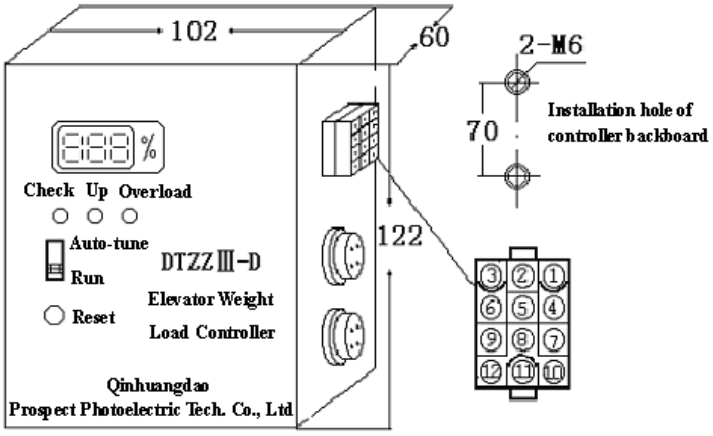

Fig.5

1.The interface of controller which provided to elevator system is as Fig.5, the definition of terminals is followed:

1) Terminals of No.1 and No.4 are supply power. No.1 is DC24V+ and No.4 is DC24V- (007,008).
2) Terminal of No.2 is input of UP (car up signal) signal.
3) Terminal of No.3 is input of DZ (door zone) signal.
4) Terminal of No.5 is input of DO (door open) signal.
5) Terminals of No.6 and No.12 are output of light-load , relay contact. It is active (on) when the car is LNS, whereas it is off.
6) Terminal of No.7 is empty.
7) Terminals of No.8 and No.9 are output of LNS (overloading signal, relay contact). It is active (on) when the car is LNS, whereas it is off. (150,30C)
8) Terminals of No.10 and No.11 are output of LWS (full load signal, relay contact). It is active (on) when the car is LWS, whereas it is off. (161,30C)

Table of defining terminals

The number of plug terminals	Wire type
(1) 24V+power source	007
(4) 24V-power source	008
(2) Up	201
(3) DZ	200
(5) DO	202
(6)、(12)light load	
(8)、(9) overload	155,30C
(10)、(11) full load	161,30C

2.Display

The controller adopts three-digit alphanumeric pipe display. Its function as follows:

(1) There are two cases when the switch is in running position:

(A) It displays three numbers when it is the DO signal. The three numbers is the load of car (%)

(B) It displays one or two numbers when there is not DO signal. It is the position of the car.

(2) There are three displays when the switch is in the auto-tune position:

(A) When you hear the first long sound, it displays the floor number.

(B) When you hear the second long sound, it displays the duty load of the elevator.

(C) When you hear the third long sound, it displays the referenced voltage of the controller.

三、Installation

1. The sensor installed in machine room. The sensor should be installed on rope hitch plate. The sketch map is followed: (Fig.6)

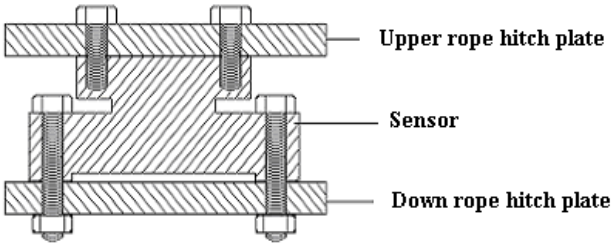

Fig.6

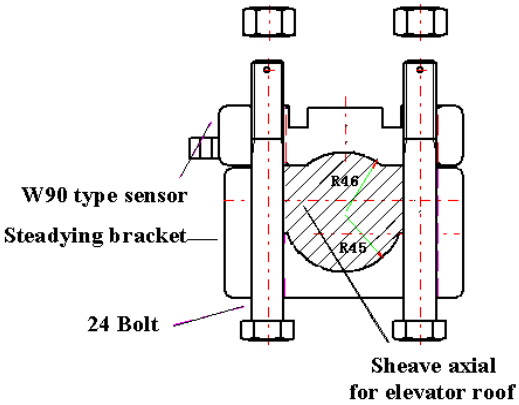

Fig.7

(1) The sensor is installed between the two rope hitch plates. It fixes with rope hitch plates by the bolts.

(2) The bolt connected upper rope hitch plate and sensor must not overrun the down surface of the connecting part of the sensor.

(3) The hitch rod should avoid connecting with the sensor as far as possible.

(4) The hitch rod should avoid contacting with the hole wall of rope hitch plate.

2. The sensor installed in top of car. The sketch map of installation is followed. (Fig.7)

四、The first checking

1.Power on

Turn the switch to the running position (underneath) and power on. The controller sends out a long sound. Three-digit alphanumeric pipe displays 888, then the first alphanumeric pipe displays 1 and the other two put out. (If the controller

sends out three long sounds after it powers on, please check the cable of controller to sensor.) Three-digit alphanumeric pipes all display when there is DO signal to controller. It displays the load of the car of elevator.

2.Reset operation

(1) Turn the switch to running position (underneath).
(2) Power on, forbidden operation till after ten minutes.
(3) Let the car of elevator to bottom floor, then open the door (make the controller receive DO signal), press the reset button three times, you will hear sounds three times. The reset operation is over.

五、Product commissioning

1.Fast debugging

(1) The controller only connects DO signal.
(2) Make the controller receive the DO signal. Then turn the switch to running position.
(3) Reset operation under empty car. (Under the empty car, press the reset button three times continuously, then you will hear three long sounds, which send by the controller and it will display 000)
(4) The elevator's packed 99% of the duty load and press reset button for over 5 seconds. After hearing a long sound, loosen it immediately. The three-digit numbers display 099-100.
(5) Increasing weight to car till duty load quantity and it can reach the state of overload alarming.

2.Full-load debugging

(1) Under opening door (controller received the DO signal), let 99% duty load to car, then press the reset button for over 5 seconds, after hearing a long sound from controller, loosen the button immediately, it will display 099-100.
(2) Turn the switch to auto-tune position (above), after hearing three long sounds and a short sound, then let the car move up from bottom floor to next floor, open and close door, till the car reach top floor. (The controller makes two sounds auto-tune response every floor stopping.)
(3) When the car reaches the top floor, pressing 5 times reset button in 20 seconds. You will hear 5 sounds, then let the car move down to next floor, open and close door, till the car reach bottom floor. (The controller makes two sounds auto-tune response every floor stopping.)
(4) After the car reach the bottom, turn the switch to running position when car door is open. The controller displays 100%, the debug is successful.

Note: purpose of auto-tune is to correct load error aroused by the traveling cable and ropes. But if rise of elevator is less, it may ignore the error aroused by traveling cable and ropes. So the "fast debugging" can be used.

六、Load quantity correction

If the contactor of LNS and LWD active when the load in car is more than or less than the corresponding active load, you can correct by way of the following step: (For example: the car duty load is 1000kg, after auto-tune, the LWD active only when the load in car is more than 1050kg)

(1) Power off and then power on.
(2) Turn the switch to auto-tune position, after hearing two long sounds, press the reset button, then the controller will display 087.
(3) Because active value of LWS is more than the academic value, reduce the value displayed on controller, whereas increase the value.

七、light load point Settings

The controller light-load point output is set 10% when leave factory. You can set the light-load point as followed if you want to change it.

Let elevator empty and make the controller setting switch on the running position. Controller power off and then power on again. Press the reset button all the time in 2 seconds when the device working is normal. After hearing a sound, turn up the switch to the setup position immediately, after hearing a long sound you can adjust light-load point by press the reset button. Displaying number between 0.02 and 0.04, then adjust to the light-load point that you need. Turn down the setup switch to running position. Controller exit setting light-load state and work as normal.

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