

### Control Board Main Features

NP750VXX new version of P750Vxx Control board for Digiway industrial sliding gate motor P550 and P750 using encoder technology. NP750 can drive 12V or 24V, PNP, or NPN any kind of inverters.



P750V2.2



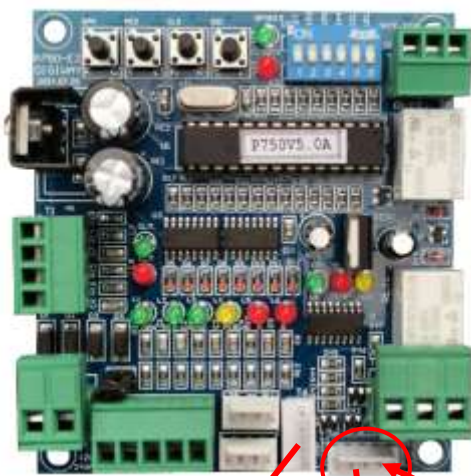
P750V4.1



P750V4.3



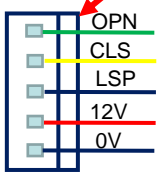
P750V5.0



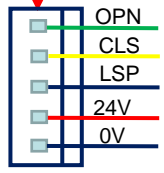
NP750V5.0

NP750VXX has one extra connector for NPN type inverter compare to P750VXX. XX is software version

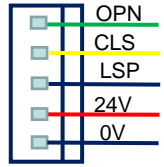
extra connector



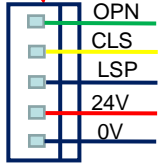
TECO FM50 inverter--12V



TECO L510S inverter--24V



NPN type input  
TECO FM and  
L510S inverter  
12 or 24V



NPN Type input  
any brand inverter  
12 or 24V

PNP type input inverter  
COM=Positive

NPN type input inverter  
COM=Negative

### Control Board Main Features

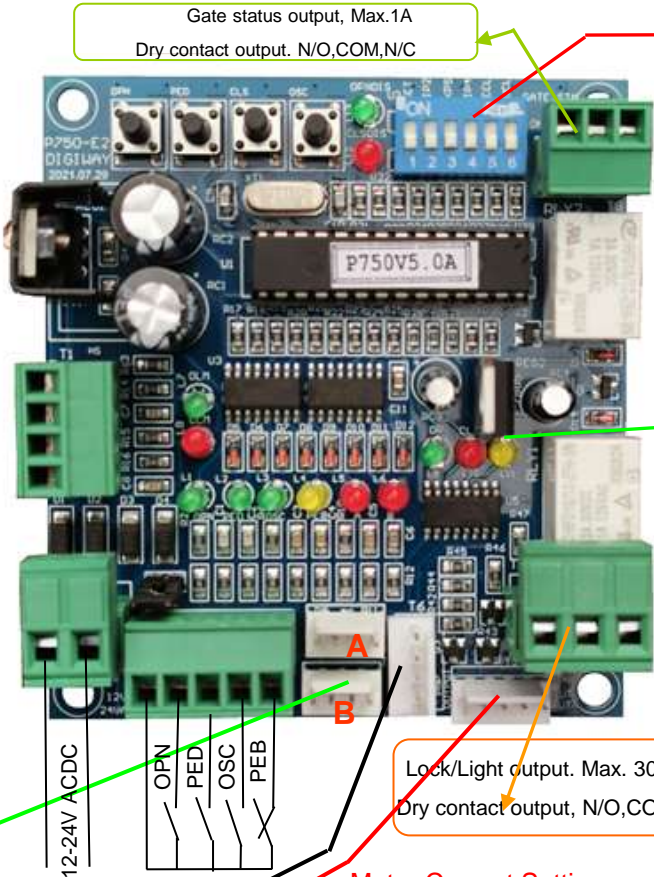
NP750V5.00 Control board is designed for Digiway industrial sliding gate motor P550 and P750 using encoder technology and any other three phase gate motor. With 4 different working mode selected by DIP switch. Internal or external coder. Varies control input and auto close, PE trig close etc.

**MODE-1 (E-Code)**  
 DIP2DIP4=OFFOFF, OLM=Reset N/O input. CLM closed limit N/O input as option. In this mode, no limit switch required. For DIGIWAY P750 and P550.

**MODE-2 (E-Code)**  
 DIP2DIP4=OFFON, OLM=Reset, N/O input. CLM=as open and close limit, N/O. In this mode, MUST have one and only one limit. Built in E-coder, only for DIGIWAY P750 and P550.

**MODE-3 (F-Code)**  
 DIP2DIP4=ONOFF, OLM=open limit N/C input. CLM=close limit N/C input. External F-coder achieve slowly down point. For any three phase gate motor with N/C limit. Like, GDS, ACRO, MDI, BTF, FAAC.

**MODE-4 (F-Code)**  
 DIP2DIP4=ONON, OLM=Reset, N/O. CLM=open and close limit, N/O. External F-code achieve slowly down point. For any three phase motor, ideally for replace Magnetic PLC and Proxy control system.



**DIP SWITCH**

DIP1: SET/RUN. ON--Set,      DIP3: LOCK OUT. ON--pulse output  
 DIP2: DIP4 Working Mode      OFF--Presence output  
 DIP2,4=OFFOFF=MODE1      DIP5: PE TRIG CLOSE.ON-enable  
 DIP2,4=OFFON=MODE2      DIP6: AUTO CLOSE. ON-enable  
 DIP2,4=ONOFF=MODE3  
 DIP2,4=ONON=MODE4

Gate Running Indicator  
 G: open,  
 R: close,  
 Y: low sp

FXX	Function	P750		P550
		2P setting	4P setting	setting
00-03	Alt Run Source	1	1	1
00-05	Main fre source	0	0	0
00-06	Alt. fre. Source	1	1	1
00-07	Main & Alt comand	0	0	0
00-12	Open high speed up limit	50-70Hz	50-70Hz	50-70Hz
00-14	Acc time1	3.0S	3.0S	3.0S
00-15	Dec time1	2.0S	2.0S	2.0S
02-00	Motor Load Current	3.0A	3.0A	2.4A
02-01	Motor Protec Current	6.0A	6.0A	4.8A
02-03	Motor RPM	2855RPM	1400RPM	2740RPM
02-04	Motor Volatge	220	220	220
02-05	Motor Rated Power	0.8kw	0.8kw	0.6kw
02-06	Motor rated frequency	50Hz	50Hz	50Hz
02-07	auto turn			
05-01	Open High Speed	50Hz	50Hz	50Hz
05-02	Close High Speed	35Hz	35Hz	35Hz
05-03	Open Low speed	15Hz	20Hz	20Hz
05-04	Close Low Speed	15Hz	20Hz	20Hz
08-18	Over Current Prote Time	3.0S	3.0S	3.0S

FXX	Function	Current Setting	
	Motor Type	P750	P550
02-00	Motor Load Current	3.0A	2.4A
02-01	Motor Protect Current	6.0A	4.8A


MODE-1 (E-Code) DIP2DIP4=OFFOFF

Mode-1 no limit switch required, easily set up, manual set up or automatic set up. Add Reset proxy switch to prevent people do the manual release before turn power off as long as spanner plug in, controller will " hold on", when spanner take out will reset automatically.


### Manual set up

**Step 0: Functional and heavy duty opened and closed stopper MUST be installed.**


**Step 1:** Install motor and Connection power.  
Default setting gate close to left.  
*(If close to right, swing any two output wires of inverter and change encoder connector to T4(A))*  
Engage clutch, power up, gate will start close.



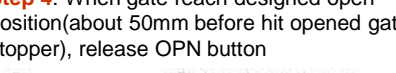
**Step 2:** When hit receiving post and stop automatically



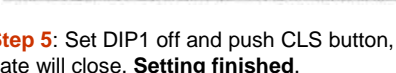
**Step 3:** Set DIP1 on, push and hold OPN button, gate will open at low speed



**Step 4:** When gate reach designed open position (about 50mm before hit opened gate stopper), release OPN button




**Step 5:** Set DIP1 off and push CLS button, gate will close. **Setting finished.**




### Auto set up

**Step 0: Functional and heavy duty opened and closed stopper MUST be installed.**


**Step 1:** Install motor and Connection power.  
Default setting gate close to left.  
*(If close to right, swing any two output wires of inverter and change encoder connector to T4(A))*  
Engage clutch, power up. Push and CLS button for about 5 seconds until both OPNLED and CLSLED are solid on, then release CLS button. gate will start close automatically.




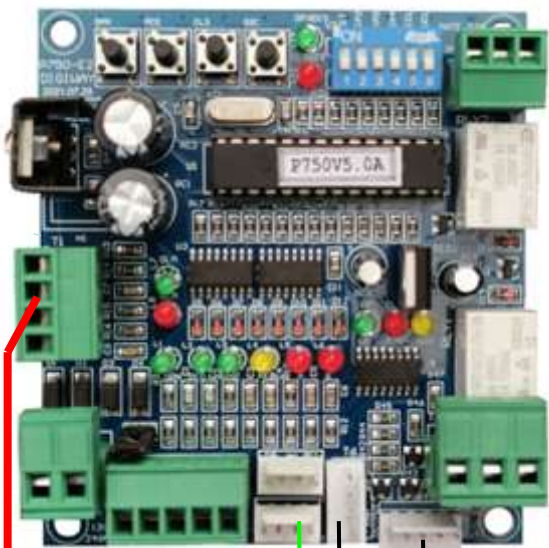
When hit **closed** post, gate stop and then automatically open



When hit **opened** post, gate stop. Setting is finished. Then can test it. If not happy, then start it again.




Push CLS button, Gate close





DIP SWITCH Set For Mode-1


DIP1: X  
DIP2: OFF  
DIP3: X  
DIP4: OFF  
DIP5: X  
DIP6: X  
X= ON or OFF




Limit SW



NPN Type  
Proxy SW



PNP Type



PNP Type

**MODE-2 (E-Code) DIP2DIP4=OFFON**

Mode-2 required one limit as open and close limit. Automatic set up. Add Reset proxy switch to prevent people do the manual release before turn power off As long as spanner plug in, controller will " hold on", when spanner take out will reset automatically.

### Installation

**Step 0:** Functional and heavy duty opened and closed stopper **MUST** be installed.

**Step 1:** Install motor and Connection power.

**Step 2:** Install two limit stoppers, one for opened and one for closed.

**Step 3:** From Proxy switch detect stopper to gate hit mechanical stopper, the distance is about 80mm. Late can fine adjust it and make gate just touch the post or stopper, not hit.

**NOTE:** ONLY one proxy switch need for open and close limits. When first time power up, controller will automatically find out gate position.

### Auto set up

**Step 0:** Functional and heavy duty opened and closed stopper **MUST** be installed.

**Step 1:** Install motor and Connection power.

Default setting gate close to left.

*(If close to right, swing any two output wires of inverter and change encoder connector to T4(A))*

Engage clutch, power up. Push and CLS button for about 5 seconds until both OPNLED and CLSLED are solid on, then release CLS button. gate will start close.



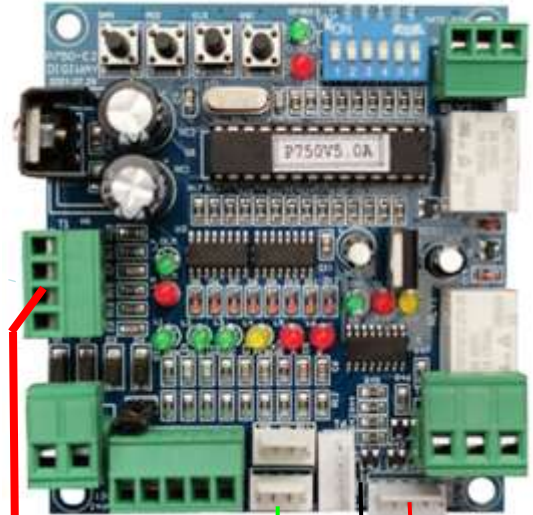
When hit **closed** limit stopper, gate stop and then automatically open



When hit **opened** limit stopper, setting is finished. Then can test it. If not happy, then start it again.



Push CLS button, Gate close



**DIP SWITCH Set For Mode-1**

- DIP1: X
  - DIP2: OFF
  - DIP3: X
  - DIP4: ON
  - DIP5: X
  - DIP6: X
- X= ON or OFF



Limit SW  
OR  
PNP  
Proxy SW



PNP Type    NPN Type

**MODE-3 (E-Code) DIP2DIP4=ONOFF**

Mode-3 required two N/C limits as open and close limits. Automatic set up. This is for any three phase gate motor with N/C limit switch.. Like GDS, BTF, FAAC, ARCO MDI etc. With P750V5.0, all those motors can run slowly down whiles approach opened or closed end

### Installation

**Step 0:** Functional and heavy duty opened and closed stopper recommended to be installed.

**Step 1:** connect F-Code input side( two thick wires) to any two of T1,T2,T3. Output with plug to T4 or T5( no difference).

**NOTE:** Default setting will runs at low speed until customer set up(learned) to specified gate.

After power recycle, gate will runs at low speed until reach to closed position, then next operation will go to normal.

Open and close low speed can be change according to application, but not recommend over 25Hz for 2 poles motor and 35HZ for 4 poles motor.



### Auto set up

**Step 0:** Functional and heavy duty opened and closed stopper **MUST** be installed.

**Step 1:** Install motor and Connection power.

Default setting gate close to left.

Engage clutch, power up. Push and CLS button for about 5 seconds until both OPNLED and CLSLED are solid on, then release CLS button. gate will start close.



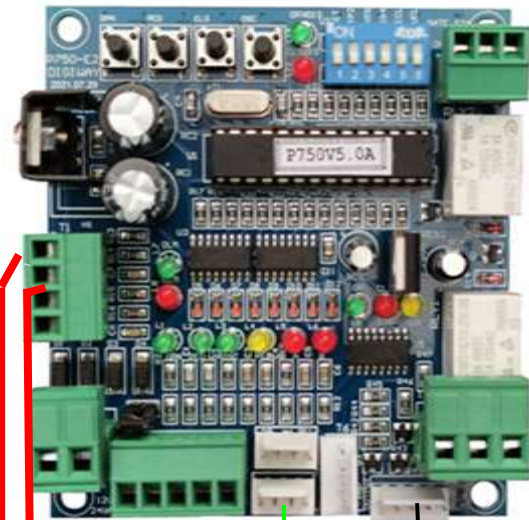
When hit **closed** limit , gate stop and then automatically open



When hit **opened** limit, setting is finished. Then can test it. ( If not happy with position, then need adjust limit and , then start learn again).



Push CLS button, Gate close



**DIP SWITCH Set For Mode-1**

- DIP1: X
  - DIP2: ON
  - DIP3: X
  - DIP4: OFF
  - DIP5: X
  - DIP6: X
- X= ON or OFF

Closed Limit

Opened Limit



F-code



PNP Type



NPN Type



**MODE-4 (F-Code) DIP2DIP4=ONON**

Mode-4 required one limit as open and close limit. Automatic set up. Recommended add on reset switch N/O and connect to OLM input. Different motor can be different. As long as OLM input active, then controller will reset. This is prevent manually move gate without turn power off.

### Installation

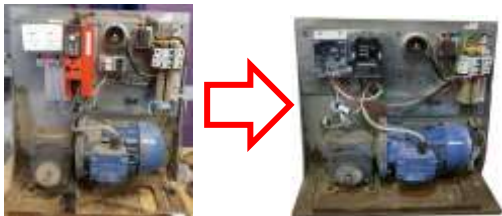
**Step 0:** Functional and heavy duty opened and closed stopper **MUST** be installed.

**Step 1:** Install motor and Connection power.

**Step 2:** Install two limit stoppers, one for opened position and one for closed position.

**Step 3:** From Proxy switch detect stopper to gate hit mechanical stopper, the distance is about 50mm. Late can fine adjust it and make gate just touch the post or stopper, not hit.

**NOTE:** ONLY one proxy switch need for open and close limits. When first time power up, controller will automatically find out gate position.



GDS SEW PLC REPLACEMENT

### Auto set up

**Step 0:** Functional and heavy duty opened and closed stopper **MUST** be installed.

**Step 1:** Install motor and Connection power.  
Default setting gate close to left.

Engage clutch, power up. Push and CLS button for about 5 seconds until both OPNLED and CLSLED are solid on, then release CLS button. gate will start close.



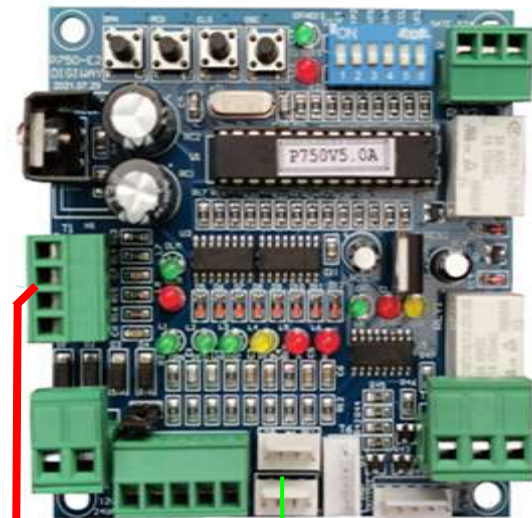
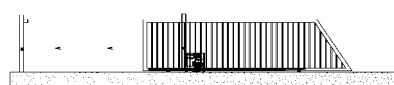
When hit **closed** limit stopper, gate stop and then automatically open ay low speed



When hit **opened** limit stopper, setting is finished. Then can test it. If not happy with gate position, then adjust limit stopper and learn it again.

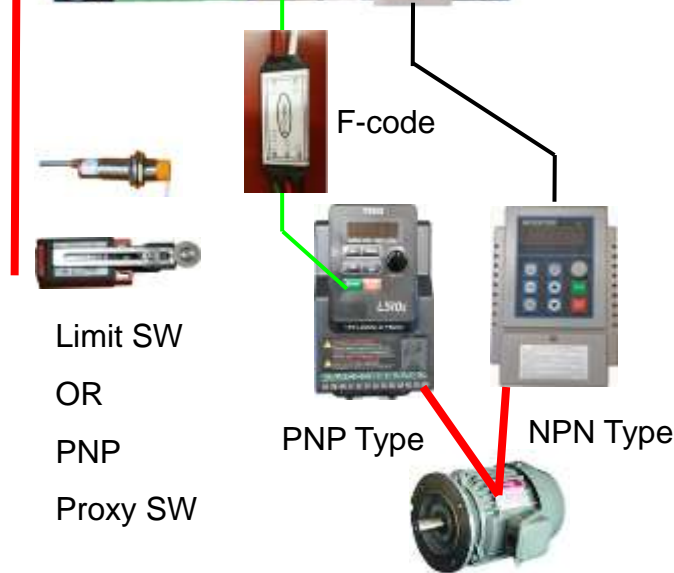


Push CLS button, Gate close



### DIP SWITCH Set For Mode-1

- DIP1: X
  - DIP2: On
  - DIP3: X
  - DIP4: ON
  - DIP5: X
  - DIP6 : X
- X= ON or OFF



## P550 and P750 Inverter L510s setting

FXX	Function	P750	4P	P550
		2P setting	setting	setting
00-03	Alt Run Source	1	1	1
00-05	Main fre. source	0	0	0
00-06	Alt. fre. Source	1	1	1
00-07	Main & Alt command	0	0	0
00-12	Open high speed up limit	50-70Hz	50-70Hz	50-70Hz
00-14	Acc time1	3.0S	3.0S	3.0S
00-15	Dec time1	2.0S	2.0S	2.0S
02-00	Motor Load Current	3.0A	3.0A	2.4A
02-01	Motor Protec Current	6.0A	6.0A	4.8A
02-03	Motor RPM	2855RPM	1400RPM	2740RPM
02-04	Motor Voltage	220	220	220
02-05	Motor Rated Power	0.8kw	0.8kw	0.6kw
02-06	Motor rated frequency	50Hz	50Hz	50Hz
02-07	auto turn			
05-01	Open High Speed	50Hz	50Hz	50Hz
05-02	Close High Speed	35Hz	40Hz	35Hz
05-03	Open Low speed	15Hz	20Hz	15Hz
05-04	Close Low Speed	15Hz	20Hz	15Hz
08-18	Over Current Prot. Time	3.0S	3.0S	3.0S