







INSTRUCTION MANUAL

P750L Sliding Gate Motor

Version –V2.x



IMPORTANT SAFETY WARNING

-  ATTENTION To prevent electrical shock, disconnect from power source before installing or service
-  ATTENTION Electricity and power motors associated accessories could be fatal or at least cause seriously injury. **All main voltage wiring must be installed by a licensed electrician.**
-  ATTENTION Additional safety device MUST be fitted such as Photo Electric Beam, Loop Detectors.
-  ATTENTION Before do the manual release, the mains power switch must be off even there is no power.
-  ATTENTION Before power on, the manual release MUST engaged
-  ATTENTION Gate opened stopper and closed gate stopper MUST be installed.

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GENERAL LAYOUT

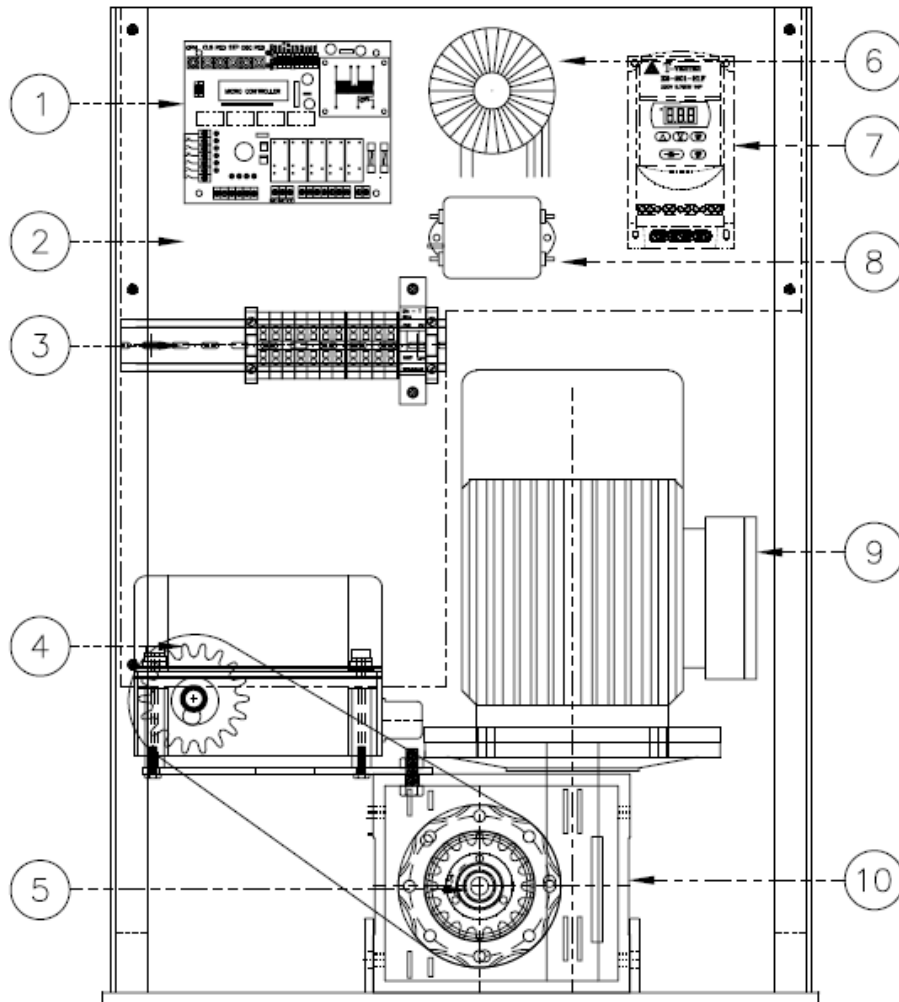


Fig -1

- | | |
|----------------------|-------------------|
| 1) AC6 Control Board | 2) Mounting Plate |
| 3) Terminals | 4) Limit switch |
| 5) Manual Release | 6) Transformer |
| 7) Inverter (VSD) | 8) EMC filter |
| 9) Electric motor | 10) Gearbox |

CONTROL INPUT AND BUTTON

1. General Descriptions

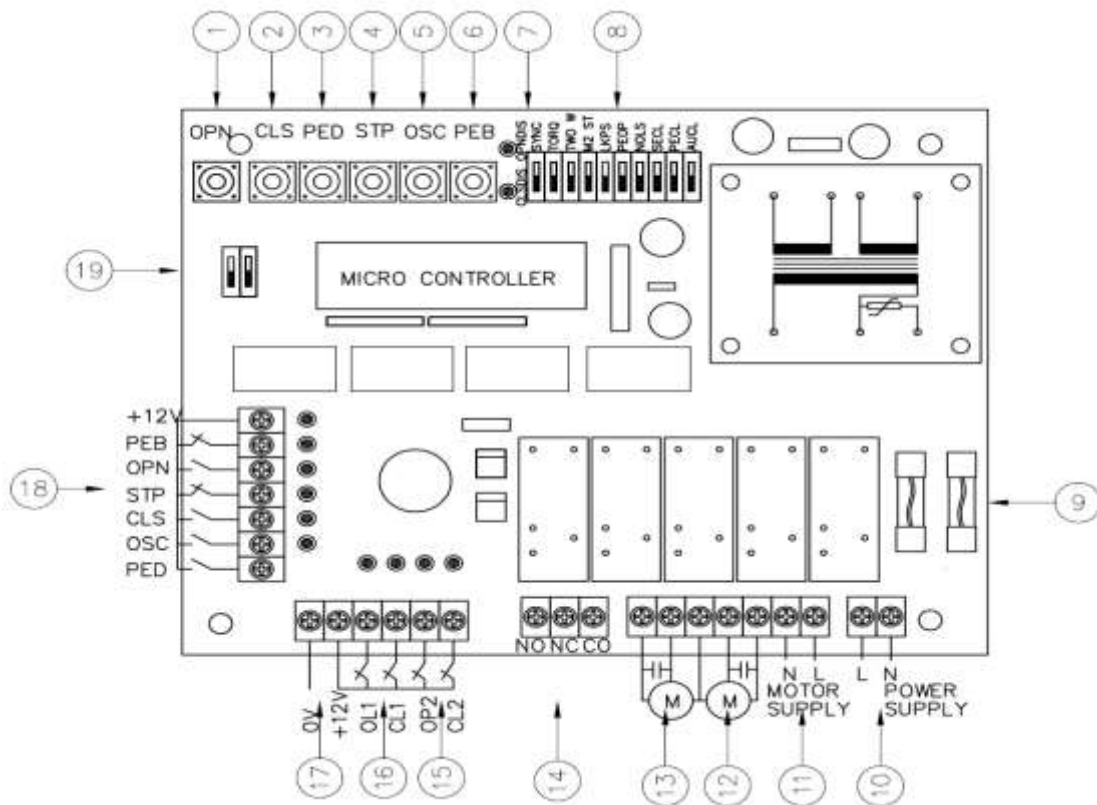
The P750L sliding gate motors was designed for heavy duty industry track gate or cantilever gate. Heavy duty three phase industry motor driven by VSD (variable speed drive), gate can run at different speeds. The controller can receive the signals from swipe card, loop detectors, remote control, photo-electric beams and any kind of access control system. Galvanised metal sheet and powder coated high quality cabinet (1.5mm thickness) has remove door (P750) and plenty of room for the access control accessories including din rail mounting. 50VA transformer (12V/24v/2A) can directly drive magnetic lock, warning lights etc.

Technical Specifications

Power supply	230/240V AC at 10A
Output voltage	230V AC three phase (via) inverter, Max. 0.75KW or 1.5KW
Motor rate	Three phase two poles 0.75KW
Gate type	Track or cantilever
Drive speed	Up to 700mm/sec (with big drive gear)
Max. Gate length	No limitation
Fully programmable	Auto close time, PE trig close time etc.
Accessories power supply	12V@2A or 24@2A, Max. 50VA, protected by 1A fuse

2. Control Board layout

2.1 View of Control board



CONTROL INPUT AND BUTTON

1. OPN open push button
2. CLS close push button
3. PED pedestrian open push button
4. STP stop push button
5. OSC open/stop/close push button
6. PEB photo electrical beams
7. Gate status display, open green, close red
8. Mode selection DIP switch
9. Motor protect fuse 5A and Transformer fuse 0.5A
10. Main inputs 240VAC.
11. Motor power input/inverter COM. input
12. Motor2 open and close outputs
13. Motor1 open and close outputs
14. Lock output
15. Motor2 limit switches
16. Motor1 limit switches
17. Limit switch input common +12VD/+12VDC @300MA output for the sensor
18. Control inputs
19. Set1 and Set2 DIP switch

2.2 Control inputs

2.2.1 Open (OPN) input & OPN push button

The OPN inputs are Push Button OPN and Terminal OPN input. Push OPN button and activating (connect OPN terminal to the +12V) the OPN input will start to open the gate. When gate opened, if OPN is keep activating, the gate will stay open. This is mostly controlled by access control system.

2.2.2 Pedestrian Access (PED) input and Pedestrian (PED) push button

The pedestrian input partly opens the gate leaf driven by motor1 in the case of single speed mode, or partly opens gate in the case of sliding gate mode. How far the gate will open depending on the Pedestrian Open Time, this can be changed by user. If P.E input is activated during the gate is closing, the gate will reopen for another Pedestrian Open Time. P.E Close setting and Auto Close setting will also apply to pedestrian cycle.

2.2.3 Close Terminals input (CLS) and Close (CLS) Push button

The CLS terminals input is used to close the gate. Push button on control board is mainly used to test when finished the installation. Pushing it will cause gate to close if the gate in the opened position or in the opening cycle. If gate is in the closed or closing, the gate situation is not change.

2.2.4 STP stops input and stop button

STP input and STP button is used for stop the gate and settings

2.2.5 OSC (open/stop/close) input

OSC input and OSC button is used for manual operation. Push to open the gate, push again stop gate, another push closes the gate.

2.2.6 Photoelectric safety beam (PE) input (N/C type)

If the P.E input is activated while gate is closing, the controller will stop the gate or reopen the gate depending on the DIP setting. If the gate in the opened position and P.E beam is activated, the gate will stay in opened

2.4 Model Select Switch (8)

2.4.1 SYNC Delay (DIP1) ON= Delay OFF= No Delay

DIP1 is on: Motor 2 delay open and motor 1 delay close. DIP1 is off, there is no delay. Not apply to Torque motor.

2.4.2 TORQUE Motor (DIP2) ON=TORQUE OFF= 240VAC Motors

DIP2 is ON, control two boom gate torque motors. OPN open both boom gates, while PED only open boom gate driven by motor1. DIP2 is OFF, it controls standard 240V AC motors.

2.4.3 WARN (DIP3) ON= Warn OFF= No Warn

DIP3 is ON, about 3 seconds audio warning before gate starts. DIP3 is off, no this function.

2.4.4 M2ST (DIP4) ON= M2 LGT out OFF= Motor out

DIP4 is on, Motor 2's out changes to light out. OP2 out is continually, CL2 out is flash at about 1Hz either open or close cycle.

2.4.5 LOCK (DIP5) ON= presence OFF= pulse

DIP5 on, the lock output is presence. The lock relay will be on if the gate is in opening, closing cycle. DIP5 is off; lock output is 0.8 seconds pulse at the start of each open and close cycle.

2.4.4 PEOP (DIP6) ON= PEOP OFF=Close only

DIP6 is ON, the PE beam will work on the open cycle and close cycle. DIP6 is off, the PE beam will work only in close cycle.

2.3.6 NOLS (DIP7) ON= N/O limit OFF=N/C limit

DIP7 is ON, the limit inputs change to N/O, and DIP7 is off, the limit inputs are N/C

2.3.8 Security close (DIP8) ON=SEC CLS OFF=NO SEC CLS

DIP8 is on and P.E input is active while the gate is opening, if the PE clear, the gate controller stops gate and begin to close the gate even the gate is not fully opened. If the PE active again, gate will just stop, but not reopen. If DIP8 is set to off, there is no this function.

2.3.9 PE trig close (DIP9) ON=PE CLS OFF=NO PE CLS (2.0sec)

If DIP9 is set to ON, after gate opened, the gate will auto close after P.E beams trigged and clear. If the P.E beams trig again, the gate will reopen as long as the P.E input is keep active until gate fully opened. If the PE is clear, the gate will only open another 2 seconds, then after PE close delay time will close again. DIP8 is prior to DIP9.

2.3.10 Auto CLS (DIP10) ON=AUTO CLS OFF=NO AUTO CLS (30sec))

If DIP10 is on, the gate will auto close after standard auto closed time (30 seconds). If DIP10 is off, the gate will stay opened if no other input to the controller. DIP9 is prior to DIP10

2.5 Timers setting

Push Buttons functions

Button	SET1---ON	SET2 --- ON	Set1 and Set2 both off---Running
OPN	Open cycle time set	Warning time set	Open gate
CLS	Close cycle time set	Lock time set	Close gate
PED	PED cycle time set	LGT time set	Partial open gate
STP	Sync motor time set	Motor stop time set	Stop gate
OSC	Auto close time set	Two T1 --spare	Open-Stop-Close gate
PEB	PE close time set	Two T2 -- Spare	PE. Input (simulated)

2.5.1 Set1 time settings

Turn SET1 on(Set2 off), red and green LED flashes a little fast alternatively.

Open cycle time

Push and hold on OPN for the full open run time setting

Close cycle time

Push and hold on CLS for the full close-run time setting

Pedestrian running time

Push and hold on PED for the pedestrian open run time setting

Sync delay time (Motor2 delay time)

Push and hold on STP for the sync delay time setting.

Auto close time set

Push and hold on OSC for the auto close time setting.

PE close time set

Push and hold on PEB for the PE close time setting.

2.5.2 SET2 time setting

Turn SET1 off and SET2 on

Warn time set

Push and hold on OPN for Warning time setting.

Lock pulse time set

Push and hold on CLS for the lock pulse time setting

LGT time

Push and hold on PED for the PE trig close time setting

Motor Stop time

Push and hold on STP for the motor stop time setting

Two-T1 time1 (spare for late use)

Push and hold on OSC for the Two-T1 time setting

Two-T2 time2 (spare for late use)

Push and hold on PEB for the Two-T2 time setting.

Turn SET2 OFF. The gate controller will back to working mode.

Factory setting

Timer	F/Setting	Step	Setting Method	Range
Open Cycle Time	60sec.	0.1sec.	SET1 on + OPN Button	0-6550sec.
Close Cycle Time	60sec.	0.1sec.	SET1 on + CLS Button	0-6550sec.
Ped Cycle Time	10sec.	0.1sec.	SET1 on + PED Button	0-6550sec.
Sync Delay Time	2sec.	0.1sec.	SET1 on + STP Button	0-25sec.
Auto Close Time	30sec.	0.1sec.	SET1 on + OSC Button	0-6550sec.
PE Auto close Time	2sec.	0.1sec.	SET1 on + PEB Button	0-25sec.
Warning time	3sec	0.1sec	SET2 on + OPN Button	0-25sec
Lock Pulse Time	1sec.	0.1sec	SET2 on + CLS Button	0-25sec
Light Time	60sec	0.1sec	SET2 on + PED Button	0-6550sec
Motor Stop Time	0.5sec	0.1sec	SET2 on + PED Button	0-25sec
Two-T1 Time(spare)	60sec	0.1sec	DIP2 on + OSC Button	0-6500sec
Two-T2 Time(spare)	60sec	0.1sec	DIP2 on + PEB Button	0-6500sec

To restore factory setting, turn power off and set SET1 on, push and hold CLS button, then power on. While hold CLS button, set SET1 off and then release the CLS button. Now controller restored factory setting from memory.

3. Light output

With the additional module, which plugs into the control board, the control board will control light, which will illuminate the driveway etc. The light will automatically turn off after preset time (customer programmable). If DIP4 is set to ON, the M2 output will change to light output.

4. Audio warn output

On Board buzzer can give warn for diagnose. Additional buzzer or relay module, which plugs into the control board, the control board give out audio warning signals before gate moves

If PB beam is blocked or Stop input is not shorted, four short bee will be heard

5. Inverter settings

Different inverter and setting are different. P750V5.0 can control nearly all model inverter. 12V or 24V accessories power supply. PNP or NPN output. Here is some samples.

- a) TECO FM 50 inverter. 12V, PNP output, now it is no longer available.

Function	F	Function Description	Setting	Unit	Note
Acceleration time	F001	Acceleration time	4.0	Sec.	
Deceleration time	F002	Deceleration time	2.0	Sec.	
Freq. Upper limit	F006	Max. Frequency	60	Hz	
Freq. Lower limit	F007	Min. Frequency	0	Hz	
SP1 Frequency	F008	Gate Close High Speed	35	Hz	
Start/Stop/Control	F010	Terminals	1		
Multifunction Input	F020	Reset Terminal Function	6		
SP2 Frequency	F026	Gate Open Low Speed	15	Hz	
SP3 Frequency	F027	Gate Close Low Speed	15	Hz	

b) TECO L510s inverter. 24V, PNP output.

Location	Function Discriptions	Setting	
		Pot	Keypad
	Gate Open High Speed		
00-03	Alt Run Source	1	1
00-05	Main Freq Source	1	0
00-06	Alt Freq. Source Select	0	1
00-07	Mina & Alt Com	1	0
00-12	Max. Frequency	60 Hz	60 Hz
00-14	Acceleration time	3.5-4.0 sec	3.5-4.0 sec
00-15	Deceleration time	2.0 sec	2.0 sec
02-00	Motor rated current	3.5A -- P750	2.4A -- P550
02-01	Motor protect Current	6.8A -- P750	4.8A -- P550
05-02	Gate Open Low Speed	15	15
05-03	Gate Close High Speed	35	35
05-04	Gate Close Low Speed	15	15

6. Set up limit switch



P750L LIMIT SWITCH SET UP



P750L limit switch type sliding motor(Gate length $\leq 15M$, Gate length $\geq 15M$, use encoder type)

P750L is limit switch controlled sliding gate motor. Four sets separate limit switch can provide Open, close, high speed and low speed signals.



Install motor (as manual)



Tools need:
two flat screw driver and one 8mm spanner



After lock nut loose, can turn stopper by hand



or use small plate screw driver turn the limit stopper



Undo 4 screws. Screws will stay on the cover



After roughly set up limit switch, just turn lock nut, then test little bit, then test and final adjust the limit.



Undo lock nut, then can adjust limit stopper/plastic As washer



After satisfied with the limit switch position, then lock nut by spanner, but DO NOT OVER TIGHT



Top and bottom for open or close, middle two for low speed



Suggest every 6 months do service and test, make sure limit switch position is right.



4mm bolts/ slot holes (at bottom of limit switch box) for adjust chain tension. Adjust 8mm bolts(fix the limit box on the gearbox) can make sure the drive sprocket and slave sprocket in line



TECO L510s Inverter Settings

Motor runs two speeds both in open and close direction. Acceleration and deceleration is in seconds. Normally is 2—5 seconds, depending on the gate and application. Less than 1 second is not recommended.

S1—Open, S2—Close, S3—Close high speed(linked together with Close), S4—Low speed.

Open high speed	Pot (50hz)/keypad	00-03=1/1	00-14=3.5-4.0s
Open low speed	05-03(20--25Hz)	00-05=1/0	00-15=2.0-3.0s
Close high speed	05-02 (35--45hz)	00-06=0/1	02-00=3.5A
Close low speed	05-04 (20-25hz)	00-07=1/0	02-01=6.8A

Open high speed can be set

By pot (00-05,06,07=1,0,1). It is easy to change. But also easily accidental touch and changed By Keypad (00-05,06,07=0,1,0). Change it through keypad.

AC6 Control Board

AC6 board is basically is the same as ATA CB6, but with more function and easy to set up. All settings through push button on board. Set dip switch SET1 or SET2 on, push and hold different buttons and get different timers setting as indicated on board. See guide line on PCB. If PE beams is blocked or fault, the board will continuously have four beeps. If do not want it continues beeps, can take jumper off.

7. Set up limit switch

Chain drive system is basically standard motor set on the chain drive base.



How to mounting chain drive motor

- a) Set the motor height. The chain base is adjustable. Chain slave/idle sprocket bottom line is about 10 to 20mm above the bottom line of gate bottom rail.
- b) Every 1M need one chain supporter.

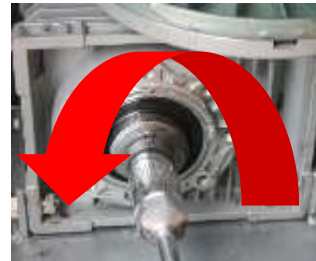
MANUAL RELEASE

9. Manual release

A: What to do during a power failure:

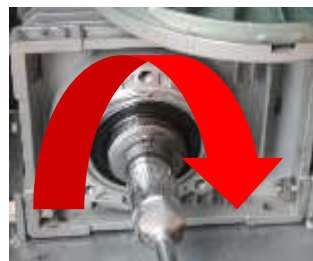
The gate can be manually pushed open and close if there is no power. To do this, you need to release the release bolt.

- (1) Open the front door and turn the switch (circuit breaker) OFF (even though there is no power)
- (2) Fit spanner (provided) onto the manual release bolt nicely.
- (3) Turn the spanner **anti-clockwise** 1 turn. Take the spanner off the manual release bolts. The gate can now be manually opened and closed. **DO NOT TURN THE BOLT MORE THAN ONE TURN, OTHERWISE OIL COME OUT**
- (4) After the gate was pushed to the required position, fit the spanner onto the manual release bolts, clockwise turn and make the bolts tight, otherwise maybe cause oil leaking.



B: What to do if power is reconnected:

- (1) Make sure the switch (circuit breaker) is still OFF.
- (2) Fit the spanner onto the bolt nicely and clockwise turn the manual release bolts and make sure the bolt is tight
- (3) Turn on the switch on, the gate should start to close if no signal input on PEB (safety) and OPN (open) inputs
- (4) When gate hit on receiving post, the controller will recall the all the settings and ready to operate.



CONDITION OF SALE

1. Orders

The placement of any orders upon Digiway implies acceptance of these terms and conditions and takes precedence over any other terms and conditions written or oral.

2. Deliveries

(a) Time of delivery will be complied with wherever possible. It is not guaranteed and is subject to extensions to cover delays caused by strikes, vehicle breakdown, traffic delays, weather and any causes beyond Digiway's control.

(b) The Purchaser shall not be entitled to be compensated for any loss or damage due to any of the causes stated.

(c) Most of the motors are stock items, but temporarily runs out of stock. Restock time can experience of approximately 8-12 weeks from receipt of official written order.

3. Warranty

(a) Digiway has 12 months return base warrants from date of purchase in normal use condition.

(b) Digiway control boards can be up to two years warranty. subject the application conditions.

(c) In lieu of all other warranties expressed or implied. Digiway shall not be liable for any special indirect, incidental or consequent damages of any kind or nature. Equipment manufactured and installed by it to be free from defects in material and workmanship for. Digiway will repair or replace at its option any product or part which it determines to contain defective material and workmanship. Defective parts must be returned to Digiway for repair or replacement. Costs associated with the return of the goods will be the responsibility of the sender. On site repairs will incur travel and labor charges. Liability for replacement parts or repairs carried out by Digiway does not extend the original twelve-month warranty period.

4. Payment

(a) Unless agreed expressly in writing, otherwise the terms of payment shall be made prior to shipment or where agreed on completion of the installation. Methods of payment are by:

- (i) Direct bank transfer with remittance advice supplied from purchaser.
- (ii) Cheque's need to be received and cleared before shipment.

5. Returns

Returns only accepted within 14 days of invoice. Credits only paid after inspection of goods. All returns subject to 30% re-stocking fee on product. Damaged goods are subject to further charges to the value of the damage.