

VIP TURNSTILE



TECHNICAL MANUAL

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WARNINGS

- ✓ Before operating your equipment, read all the information in the operating manual.
- ✓ Save your operating manual for future references.
- ✓ Do not place your equipment on unstable/moving surfaces.
- ✓ Do not allow any object to touch the power cable of the equipment.
- ✓ Do not place power cable where people might walk on.
- ✓ Do not conduct maintenance or repair work by yourself. When needed, contact authorized technical service unit.

TECHNICAL SPECIFICATIONS

POWER SUPPLY : 200-240 V AC

POWER CONSUMPTION : 60 W

MATERIAL : 1,25 mm 304 quality stainless steel
or electro static paint on metal sheet

OPERATING TEMPERATURE : (-20), (+50) C

DIMENSIONS : 94cm x 26cm x 23cm

LENGTH OF ARM : 75 cm / 90 cm for handicapped
persons model

INSTALLATION

Before installing the VIP Turnstile, make sure the solid ground thickness is at least 10-15 cm, regarding the significance of the full grip of the expansion bolts.

VIP Turnstile Installation Kit consists of 7 pcs of M10 expansion bolts.

1. Place the VIP Turnstile and the sensor pole where they will be fixed and mark the expansion bolt holes
2. Bore 8 cm deep holes with a drill, using **15 mm** drill bits. Notice that the drill should be used in an upright position while boring.
3. Hammer 7 of the expansion bolts inside the holes.
4. When the power and switch cables are ensured to be taken out safely across the turnstile, place the VIP on the expansion bolts.
5. After the final control, tighten 4 screws until there's no space between the case and the ground.
6. Place the sensor pole facing the main frame of the turnstile and tighten the screws until there's no space between the case and the ground.
7. In due course of installation, it's important to carefully align the reflector on the sensor pole



with the photocell placed on the fore bottom of the turnstile. Otherwise, once the swing gate is open, it wouldn't close itself. The reflector-photocell alignment can easily be determined by checking the led on the board.(*see.Led Configurations*)

8. Connect the power cable to 220V AC power line with 2A safety fuse.

HOW TO OPERATE- HOW TO USE

1. If the photocell won't be used, the 2nd and 3rd pins of the photocell connection point, on the VIP Main Control Board, will be jumped.
2. The swing gate will be fixed as the arrow mark is upwards.
3. The power supplied for the turnstile should be 220 VAC and transferred via SMPS. The cables shall be connected to the connection points as mentioned on the SMPS and now the power can be switched on. At this stage, the idle cable shall be plugged in the socket on the accumulator.
4. After installation, in order to check if the turnstile is operating, a switch, a reader or a control unit shall be connected to the necessary connection point as described in the diagram section.(*see.Connection Diagrams*) A suitable DIP Switch mode shall be selected regarding the control devices.(*see.DIP Switch Configurations*)



5. Issue commands as open/close to test the turnstile after complete installation.

MAINTENANCE AND REPAIR

The maintenance and repair will be carried out by the authorized technical service, following the M&R procedure. Receiving periodic servicing and maintenance every 6 months will prolong your VIP Turnstile's operating life and improve its efficiency.

The maintenance period and interval may change due to climatic factors and operating conditions.

In case of malfunction or breakdown, the technical service should be notified immediately.

UNAUTHORIZED PEOPLE SHOULDN'T BE ALLOWED TO CARRY OUT MAINTENANCE OR REPAIR.

TRANSPORTATION AND STORAGE

The products should be in their original package during transportation. Warnings placed on the package should be taken notice of during loading, transportation and piling.

DON'T PILE MORE THAN 3 PRODUCTS!



ATTENTION PLEASE

- Please leave at least 3m safety gap between IP Turnstile and loading door.
- Please do not be permitted your pets to play under the VIP Turnstile arm.
- Please protect your device with a powerfull grounding.
- Do not conduct maintenance or repair work by unauthorized person.
- Please ask Authorized service for peripherals to be connected externally to the VIP Turnstile
- Do not shorten or extend the VIP Turnstile arms without consulting the Authorized service
- Do not try to take over / under the space of the VIP Turnstile arm.
- Do not spray water directly on the VIP Turnstile using hose or similar instruments.
- Please do not forget that after VIP Turnstile arm opened and if autoclose option is active, if you don't pass within a certain time, turnstile will cancel the transaction and close the arm.

- Please take care of warnings and working conditions which are on the device and user's manual.

1. DEFINITION

This specific design is for VIP entries and also for entries of handicapped person. It has been requested by hospitals, supermarkets and companies. The specific properties of VIP turnstile is below:

- Bidirectional operation
- To identify the user during the access
- Microprocessor contolled system
- Electromechanic locking mechanism

VIP Turnstile can use easily with each type of Access Control Unit.

2. PHYSICAL SPECIFICATIONS

2.1 Electrical specifications

VIP Turnstiles standard electrical voltage is 200-240VAC. The maximum sudden power that the turnstile gets is 60W. For access control the turnstile have standard dry contacts.



2.2 Dimensions

VIP turnstiles height is 94 cm, length is 26cm and width is 23cm. The length of the arm is 75 cm. (For entries of the handicapped person, length of arm is 90cm) You can see the details of the dimensions in the technical drawing

2.3 System specifications

VIP Turnstile is micro-processor controlled. Operates in two directions. System continues the normal operating by the batteries in case of a power failure. After the system gives permission to turnstile, there is a time period (you can set this period) that the turnstile is ready for passing

3. MECHANICAL PARTS

VIP turnstile is composed of a top cover, body and arm.

3.1 Top Cover

The cover of the VIP turnstile can be either same as the body material or plexi, marble, granite, and verzalite. In places where the decoration properties are important we can use wooden top covers. The top cover height is 2,5cm, length is 26cm, and width is 23 cm.

3.2 Case

The VIP turnstiles body is 1,25mm stainless steel or electrostatic paint on metal sheet. In case of using metal sheet the body can be in different colors for the demands of the customer. The body has a height of 94cm, length of 26cm, and width of 23cm.

3.3 VIP arm

For Access control end access permission, there is an arm in cylinder shape on the body of VIP turnstile. The arm has 75 cm length, 27 cm height and 3 cm diameter.

4. ELECTRONIC CONTROL

4.1 Main Control Board

The microcontroller based main control board is controlled by Microchip Pic16F876A processor. This processor controls all operations of the VIP turnstile. The power supply of control board is from the main transformer of the turnstile. Also the charging unit for the batteries is in the board. In case of a power failure the board gets the electric power from the batteries. In the board there are a switch to set the working mode of the VIP turnstile. This is;



DIP SW1 decides the Operating mode. Its position should be arranged according to the control unit of the device.

In OFF state device controled by a reader. Arm opens via contacts comes from reader and only closed by autoclose mechanism. In this state AC jumper must be ON.

In ON state arm opens with contacts from buttons and closed by both autoclose mechanism or button. If you don't want to use autoclose, AC jumper must be OFF
DIP SW2 used for calibration mode. In OFF state device enters to the calibration mode. In ON state device work in normal operation.

- L1 Green (Led) indicator for 24VDC on the board
- L2 Green (Led) indicator for Motor Power
- L3 Green (Led) indicator for 5VDC on the board
- L4 Red (Led) indicator for Reflektive Sensor
- L7 Green (Led) Arm position "LEFT"
- L8 Green (Led) Arm position "CENTER"
- L9 Red (Led) Arm position "RIGHT"
- L10 Green (Led) indicator for Left Button
- L11 Green (Led) indicator for Righth Button
- L12 Green (Led) indicator for "Emergency Mode Aktive". Normaly, Led is light.

4.1.1 Automatic Closing

There are two ways for closing the VIP turnstile. The first way is by pressing the close button. This is a manual way. And the second way is automatically closing. By setting AC Jumper, the

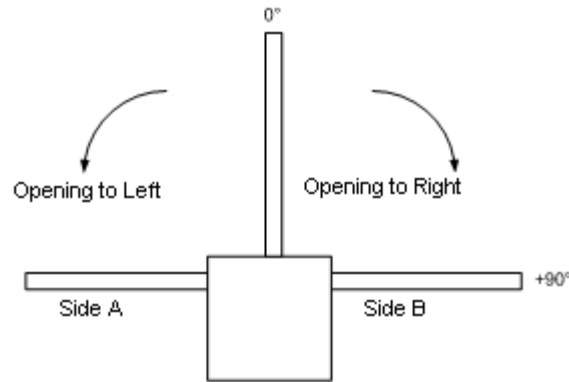
VIP turnstile arm automatically closes in a determined period (1sn–60sn) after opening. This period can be changed by using the trimpot (P2) in main board. While turning the trimpot clockwise increases this period, turning it counter clockwise decreases this period.

4.1.2 Auto Closing Time

If the AC Jumper is set then the VIP turnstile automatically closes. The time that the turnstile arm is open before automatically closing can be set by using this P2 trimpot on main board. This time can be set between 1-60 s. Turning this trimpot to right increases the closing time. Turning it to left decreases the closing time.

4.1.3 Arm Position Adjustment

When the power is turned on, the ledbar will turn green (OK). L8, the position led, will flash because the swing gate is in the middle position.



The VIP swing gate is set to -90, 0 and +90 during the factory production.

If these positions desired to be changed or reset, DIPSW 2 is turned to OFF and power of the board shall be cut and resupply. In this way, device will start in adjustment mode. At restart, the position leds (L7, L8 and L9) will flash for 1 second. No flashing will be seen. Now the swing gate will be operated by the switches and the required position will be set. What should be taken into consideration is the position ranking to be set. First, left pole then center pole and finally the right pole shall be adjusted. Left and right buttons are used to adjust the arm position. When the arm is moved to the desired left-end position SETTING button is pressed as a result all positioning leds glow.

That's mean the state of position is set. Same set of processes are done for Center and right positions. Ones

right position is set, the arm moves through the center and right position LED glows continuously after 2 second whilst center position LED flashes. The flashing led represents the position of the arm and the stable glowing led represents the starting position of the arm. DIP SW2 rolls back to ON position to exit from the adjustment mode. In case of entry and exit without setting any position to adjustment mode, the previous ones are kept. But it is not possible to roll back the process once it is done.

P1 potentiometer is used to calibrate the level of the voltage as well as the working speed of the motor. Anticlockwise the voltage is increase and vice verse.

4.1.4 Operating Mode

Dip Switch Group

- SW1 ON ---> Open / Close with push button
- SW1 OFF ---> Open with button/access device and automatic closing

- SW2 ON ---> Standart Operating Mode
- SW2 OFF ---> Arm Position Adjustment Mode

4.1.5 Emergency Mode Switch

Pin 5 and 6 of the Button Connector is used for emergency situation. If connected switch is ON, turnstile continue normal operation. If it is OFF, VIP turnstile opens the arm and waits until this switch turns ON state. This switch should be used for emergency use. In any



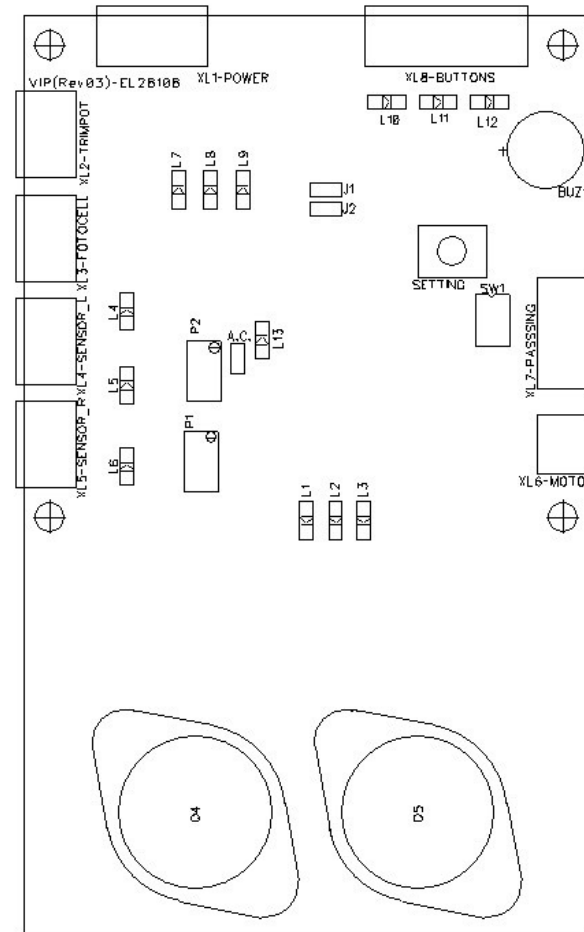
emergency situation (fire, earthquake etc.) VIP turnstile should be opened for free passing mode by pressing the emergency switch. Using this switch is optional and it is shortened in production line. If switch will be connected first you should remove the short circuit and then connect a switch with ON/OFF state.

4.1.6 Sensor Control

VIP Turnstile detects objects which are obstructing the passing or closing the arm by photocell, mounted in to the body. VIP Turnstile uses Safety photocell with reflector. Reflector should be mounted opposite of the sensor vertically to use this safety photocell efficiently. This sensor detects any object which is under the arm and stops the arm. The VIP Turnstile opens the arm if any object detected while arm is closing.

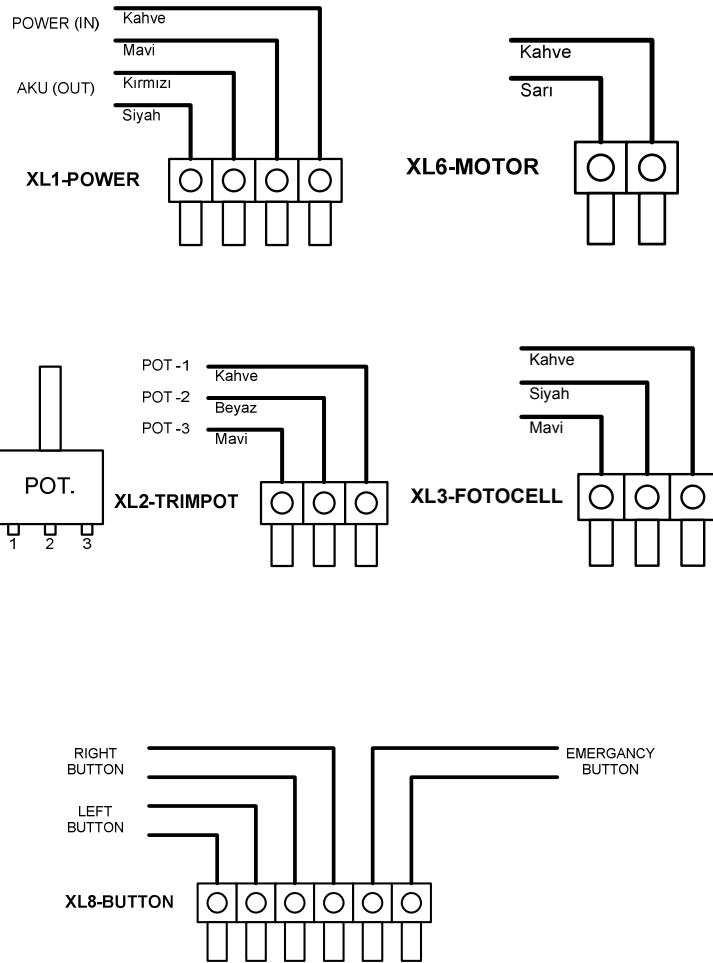


MAIN BOARD

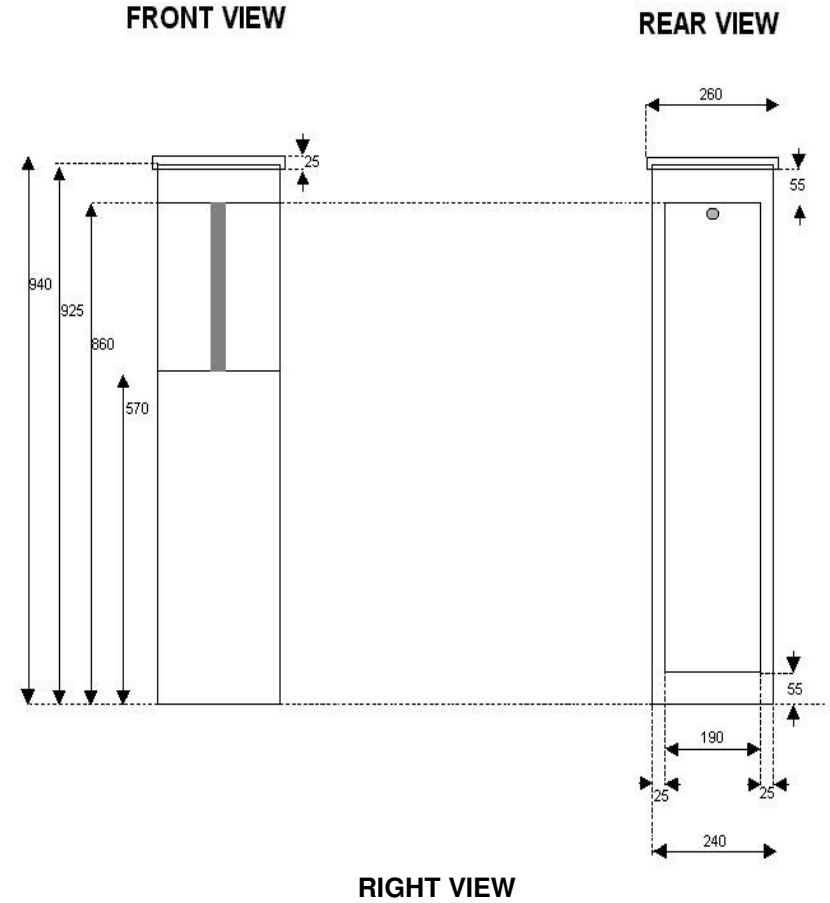


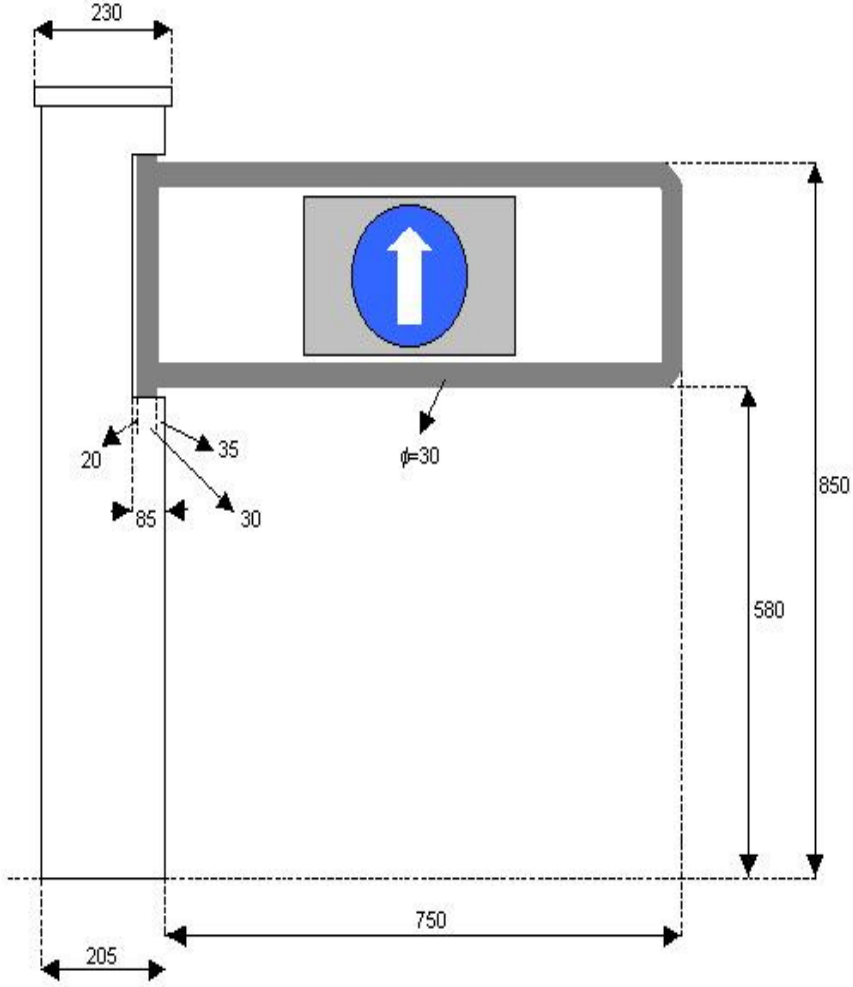


CONNECTORS



TECHNICAL DRAWING





VIP TURNSTILE ARM

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