



Vehicle Access Control  
Pedestrian Access Control  
Safety & Security Equipment

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# TRISTAR SL3 Waist Height Turnstile Instructions (v05/20)



## Unpacking the turnstile

First remove the top cover of the wooden crate, then the side cover. The turnstile inside the crate can now be pulled out of the crate. Do not remove the plastic wrapping until the turnstile is ready to be used as this will prevent any damage to the stainless steel cabinet.

## 1. Introduction

The TriStar SL3 automatic turnstile is designed for use in high volume traffic areas to control pedestrian traffic. Any type of access control or ticketing system can be used to activate the turnstile. The turnstile is operated using a DC brushless motor which ensures a smooth operation and the inbuilt encoder guarantees exact positioning of the arm. When connected to the fire alarm or other emergency system the active arm drops allowing fast exit from the building. During a power failure the arm drops and will automatically reposition itself when the power is restored.

## 2. Technical Specifications

<b>Model No</b>	TriStar SL3
<b>Throughput</b>	25 users per minute
<b>Channel width</b>	550-600 mm
<b>Duty cycle</b>	100%
<b>Operating input</b>	Potential free N/O
<b>MCBF</b>	300 million operations
<b>Safety devices</b>	Arm drops in emergency
<b>IP rating</b>	IP 55 standard
<b>Signal time out</b>	Adjustable up to 20 seconds
<b>Power supply</b>	220vac +- 10%
<b>Motor voltage</b>	24vdc
<b>Power consumption</b>	50W
<b>Working environment</b>	-30°C ~ +70°C
<b>Relative humidity</b>	95%

## 3. Standard features

- 3.1 Easy set up using the LED display.
- 3.2 Accurate positioning using the encoder.
- 3.3 The control panel shows the status of all key components.
- 3.4 Multiple input and output ports, can be configured to user requirements.
- 3.5 When the arm is returning to the default position it slows so that there is no mechanical force on the internal components.
- 3.6 Suitable for both Indoor and outdoor.
- 3.7 The control panel indicates the current status.
- 3.8 The rotation speed of the arm while entering the turnstile can be adjusted.
- 3.9 If the arm is forced without presenting a card the arm locks for 4 seconds.
- 3.10 The turnstile can be opened by two input signals (signals can be input by access controller, push button or other equipment).
- 3.11 Indicator lights: When the turnstile is ready to read the card, the light in the middle will be yellow. After reading card the upper blue light will come on. If someone tries to push the arm without permission, the red light will come on.
- 3.12 Single direction or bi direction is optional.
- 3.13 In an emergency or power failure the active arm will drop. The control panel can be

connected to the fire alarm or any type of emergency input. When the power is restored or the emergency input is switched off the arm automatically returns to the default position

- 3.14 The SL3 has a memory input that remembers how many access cards have been presented and does not lock the turnstile until all users who have presented their cards have passed through the turnstile.
- 3.15 If no pedestrian passes through the turnstile after swiping their card the turnstile will return to lock mode after a pre-set time (time adjustable).

#### **4. Optional features**

- 4.1 Voice prompt and display screen available.
- 4.2 An external counter can be connected to count the number of people passing through the turnstile.
- 4.3 RS485 communication, PC command through serial port
- 4.4 Audible and / or visual alarm to indicate attempted forced entry.

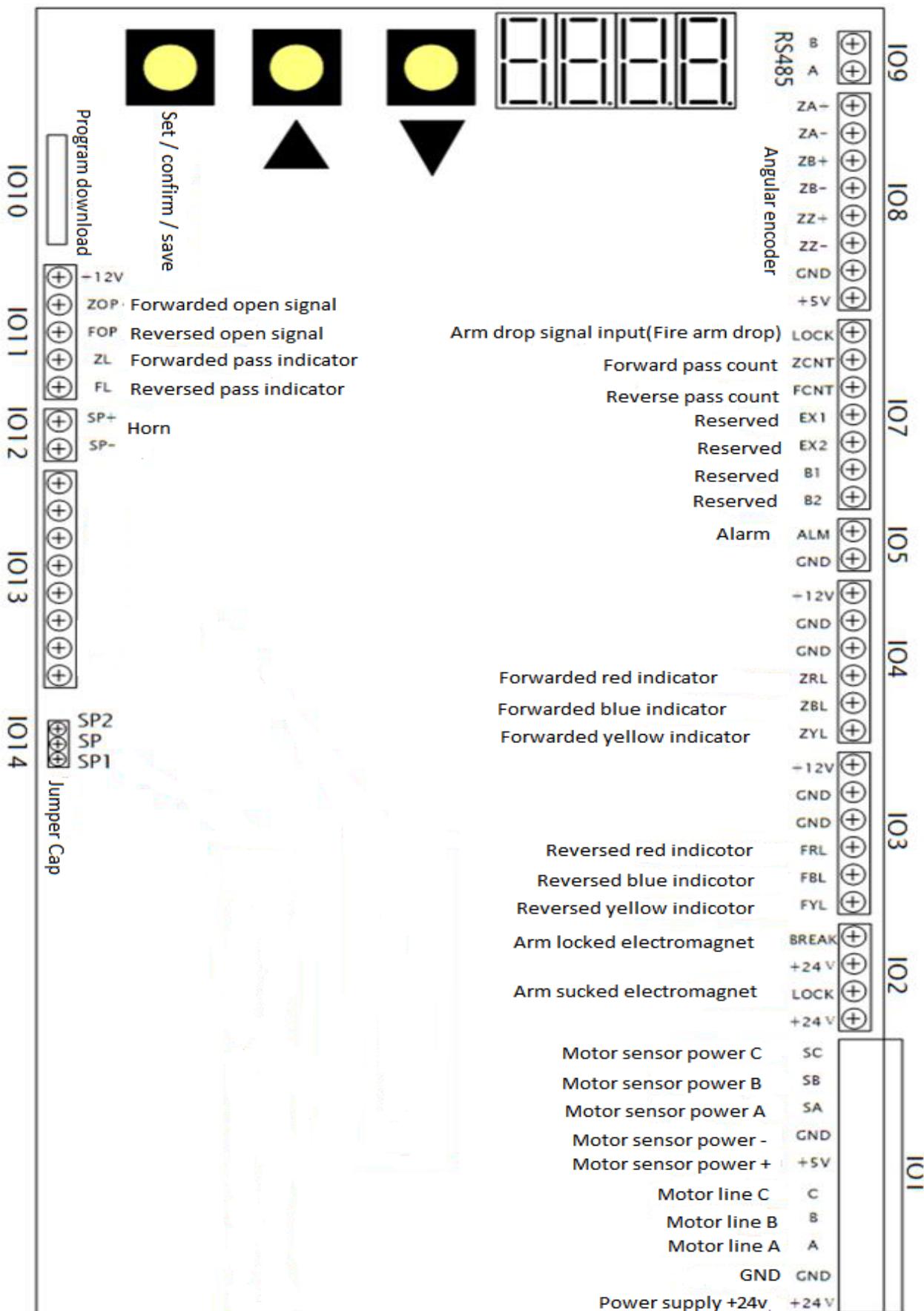
#### **5. Mechanical installation**

- 5.1 The turnstile should be mounted on a smooth level surface; a concrete base is preferred especially for outdoor applications.
- 5.2 Two hold down bars are provided and these should be fixed with M12 x 100 mm expansion bolts.
- 5.3 The conduit entry can be inside the leg of the turnstile or through the cabinet wall.

#### **6. Electrical Installation**

- 6.1 All electrical connections must be made by a qualified electrician in accordance with Australian wiring regulation AS/NZS 3000 2007.
- 6.2 The turnstile requires a 5 amp 240vac power supply fitted with an earth leakage unit and a suitable circuit breaker.

## 7. Z3D001A Control Panel



## 8. Set up Instruction

After power-up, the LED on the main board will display the version number of the current software. For example, the display shows 0-01, indicating that the current software is V01. The display will then show : 2017-12-12-10-41-30 (year, month, day, hour, minute, second). After this display the turnstile arm will automatically rotate to the normal working position after completing a self test, the turnstile is now ready set the parameters.

### 8.1 Main board control buttons and LED display

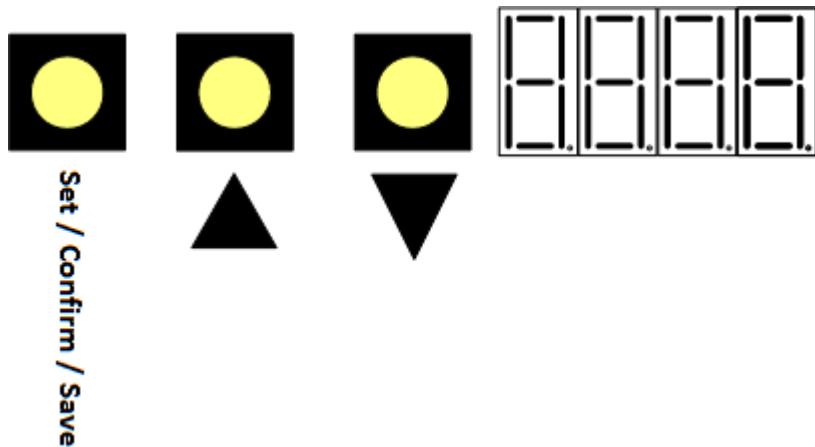


Figure 11 Digital Tube

### 8.2 Parameter set up

For example: If you wish to change parameter P-01 (counting function)

- Press the "Set / Confirm / Save" button for 3 seconds to enter the set up mode.
- If you change the value of the parameter to 1 by pressing the "Up" and "Down" keys, this will enable the counting function and finally press the "Set/Confirm/Save" button to save the parameter.

If you want to set other parameters, after displaying P-01, you can change the type of the parameter by "Up" and "Down".

Parameter	Description	Value		Value	
P-00	Example				
P-01	Counting function selection	0	Disable	1	Enable
P-02	To allow access in <b>entry</b> direction	0	Disable	1	Enable
P-03	To allow access in <b>exit</b> direction	0	Disable	1	Enable
P-05	Reserved				
P-06	Entry control by	0	Swiping card	1	Free wheel
P-07	Exit control by	0	Swiping card	1	Free wheel
P-08	Rotation speed of arm during self-check at startup	Value is 0-100, the larger the value, faster the speed, default 70			
P-09	Rotation speed when operating the turnstile	Value is 0-70, default 50			
P-10	Reset speed when the bar is off center	The value is 0-50. The larger the value, the more accurate the accuracy, but the greater the jitter, default 34			
P-11	Speed setting after the arm locked	The value is 0-70, default is 40			
P-12	Recovery time of the first lock ( <i>recovery time of the first forced lock l: the recovery time of the second lock is 4 times of the first, and the recovery time of the N times lock is (n-1)*4 times of the recovery time of the first lock</i> ).	Maximum value 20S, defaulted 2S			
P-13	Waiting time after swiping card	Maximum value 20S, default 8S			
P-14 to P-24	Reserved				
P-25	Zero setting				
P-26	Program version selection				

### 8.3 Interface instruction

Interface	Name	Pin definition
IO3	The reversed panel status indicator	+12V —+12V output, power for indicator GND —Power GND GND —Power GND FRL —Reversed red indicator FBL —Reversed blue indicator FYL —Reversed yellow indicator +12V - +12V output, powering the panel status indicator GND GND FRL - status indicator red light FBL - status indicator blue light FYL - status indicator yellow light
IO4	Forward panel status indicator	+12V —+12V output, power for indicator GND —Power GND GND —Power GND ZRL —Forwarded red indicator ZBL —Forwarded blue indicator ZYL —Forwarded yellow indicator +12V - +12V output, powering the panel status indicator GND GND ZRL - status indicator red light ZBL - status indicator blue light ZYL - status indicator yellow light
IO5	Alarm interface	ALM —Alarm output signal ALM —Alarm output signal ALM GND
IO7	Forward, reversed counting Arm drop signal input	B1 —Reserved B2 —Reserved EX2 —Reserved EX1 —Reserved FCNT —Reverse pass counting ZCNT —Forward pass counting LOCK —Arm drop signal input(fire arm drop)
IO9	Communication interface	485 A 485 B

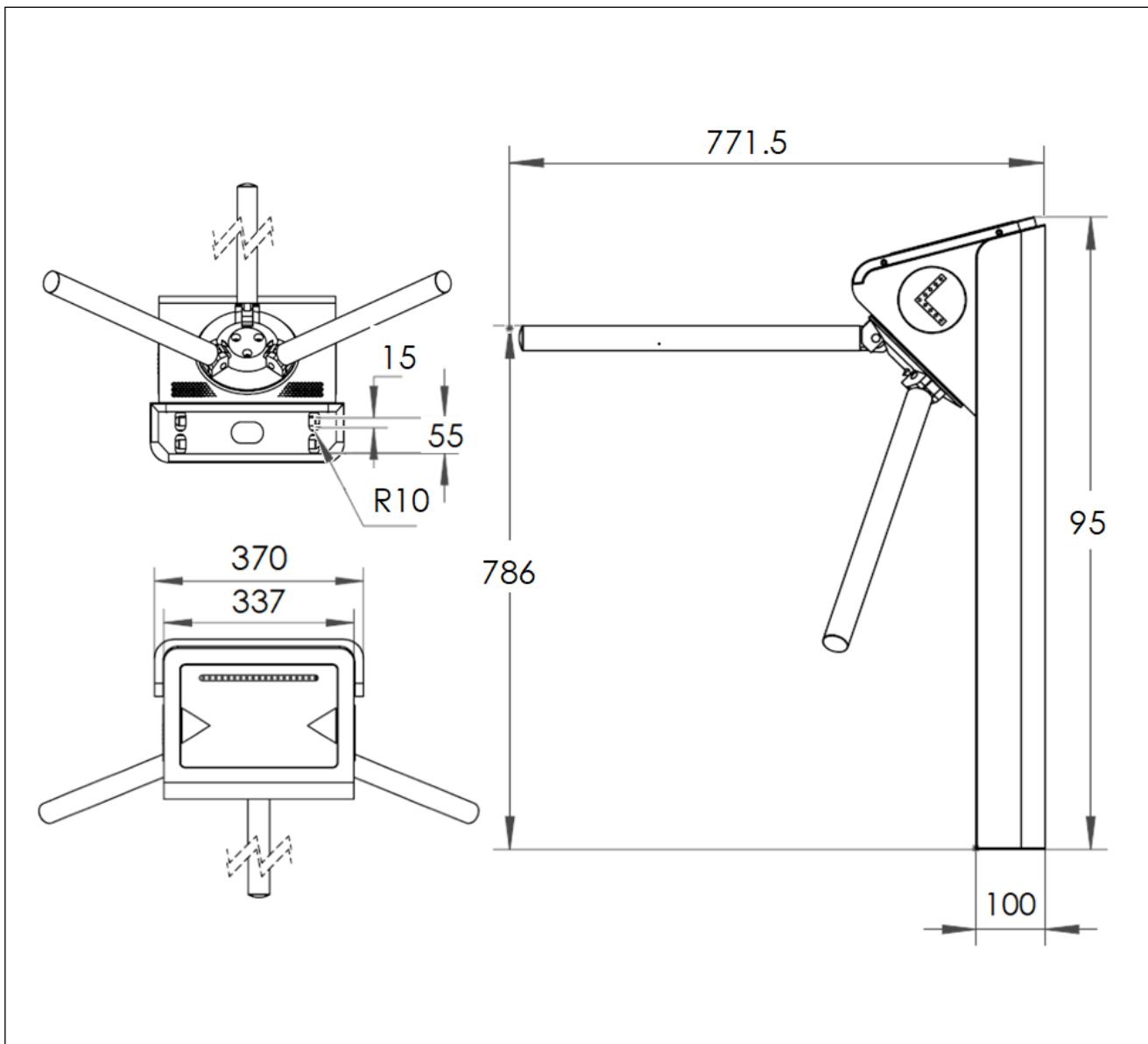
### 8.4 Digital zero setting method

- Power on, waiting for the self-test to be completed.
- Press the "Set/Confirm/Save" button for 3 seconds to enter the set up interface, then use the up and down keys to adjust the parameter type to "P-25", and finally press the "Set/Confirm/Save" button within 5 seconds.
- Adjust any one of the arms manually to the "closed position", the gate is automatically reset, the turnstile will use the newly set zero point after the reset.

## 9. Trouble shooting

Problem	Action
No response when triggered	Close cover
Arm is not returning to start position	Check cam for wear if OK add lubricant
Arm is slow returning to start position	Adjust tension springs
Emergency arm drop off not working or arm won't lock in position when power on	Adjust the position of the release solenoid
Arm does not automatically lock in position	Adjust position of photocell on disc.

## Turnstile SL3 Dimensions



**NOTE:** The concrete pad should be 20Mpa (min) 150 mm thick, cured for 7 days on a suitably compacted foundation. Hold down anchors (4) to be 12mm dia x 100mm into the concrete.

### Cleaning and Maintenance of Stainless steel cabinet

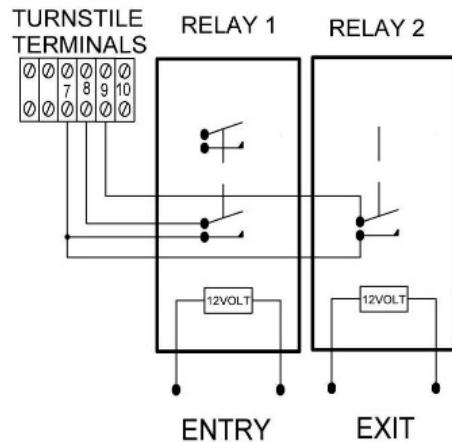
Initial cleaning, wipe down exterior surfaces with thinners, then polish with stainless steel polish

If outdoor polish every 3 months

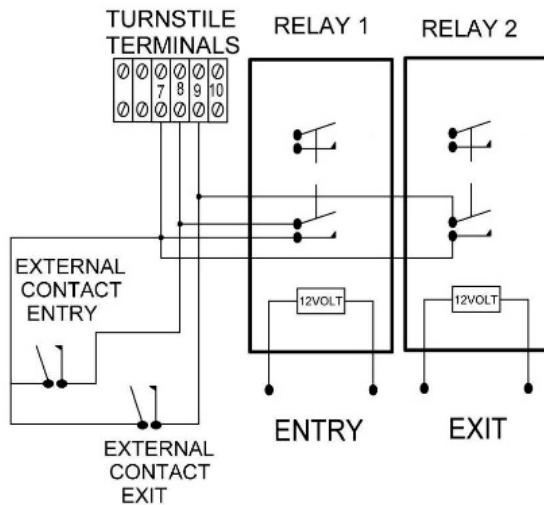
In wet environments (daily cleaning with water) polish every 4 weeks to prevent "tea staining"

Polish every week if salt spray present

OPTION 1



OPTION 2



OPTION 1 (PREFERRED): EXTERNAL 12VOLT SWITCHED CONTROL CONNECTED TO RELAY AS SHOWN.

OPTION 2: POTENTIAL FREE EXTERNAL CONTACTS CONNECTED TO TERMINALS.