



TTR-04.1

Electromechanical Tripod Turnstile for indoor application

Technical Specification

Drive: Hand operated.

Orientation: The same turnstile can be installed as either left hand or right hand unit.

Design: The TTR-04.1 consists of a turnstile housing with a built-in control logic board (CLB), a remote control panel, and a set of barrier arms (type of barrier arms is specified at time of order). The turnstile housing is a formed and welded metal structure with a cover. A LED indication display is located on the front panel of the cover. The head of the housing contains a rotation mechanism with three incorporated barrier arms and a damper, a self-centering mechanism, a control mechanism with optical arm rotation sensors and a locking device, a mechanical release lock.

Materials:

Turnstile Housing:	steel, powder coated
Tripod Hub:	mild steel, painted black
Barrier Arms (standard and anti-panic):	AISI 304 stainless steel tube with plastic caps, polished diam. 32mm

Function: The turnstile is intended for bi-directional single or multiple passages. Access can be controlled in either direction.

**Status/Direction
Light Indication:** The large LED display with bright pictograms for status and direction indication (standard feature):

- Green Arrow indicates the direction of authorised passage, the turnstile is open in the set direction;
- Red Cross indicates ban on passage, the turnstile is locked.

**Control over
Turnstile:**

The turnstile can be operated autonomously from cable or wireless remote control panel as well as from any identification or access control system.

- Electrical controls for both entry and exit operation are as standard.
- The ability to choose either pulse or potential control mode for the turnstile ensures its correct operation with any access control system. In both modes the turnstile is operated by input of the



control signal to the connector block.

- The turnstile is a Normally Closed unit - the mechanism is locked until a valid authorisation signal is received or the turnstile is unlocked with a mechanical release key.

Control Mechanism Components:

Operation of the turnstile is controlled by an electro-mechanical head mechanism with the following standard features:

- a self-centering mechanism to ensure automatic complete rotation of the barrier arms to home position regardless of the force used to pass through the turnstile;
- a control mechanism with optical arm rotation sensors and a locking device:
 - the arm rotation sensors track passages through the turnstile to ensure accurate count inputs to access control systems for reports generation;
 - the locking device securely locks the turnstile in home position after each passage;
- a hydraulic damper to ensure smooth and quiet operation;
- a mechanical release lock to unblock the turnstile with a key in the event of emergency.

Operating Modes:

The turnstile features 6 operating modes set from the remote control panel:

- single passage in the set direction (open for passage of one person in the permitted direction)
- bi-directional single passage (open in both directions for 'one-by-one' passage)
- free passage in the set direction (open for multiple passages in the permitted direction)
- free passage in the set direction, single passage in the opposite one (open for multiple passages in the permitted direction and for passage of one person in the opposite direction)
- always free (open for entry and exit)
- always locked (closed for entry and exit)

Interface:

The turnstile is controlled via the microprocessor CLB (Control Logic Board) placed inside the turnstile housing. The CLB microcontroller processes the incoming commands, keeps track of the signals from the optical arm rotation sensors and from the intrusion detector, generates commands to the control mechanism and operates external devices. The standard features are as follows:

- galvanic decoupling of the outputs to ensure noise-immunity of the turnstile electronics;
- «Fire Alarm» input facility for unblocking the turnstile at the fire alarm command or from emergency unblocking button;
- pre-set timeout facility;
- relay outputs for connection of remote indicators, status lights, intrusion detectors, sensors and sirens.

The logic is protected against short circuits, overloads and polarity inversion.
The PSU, the remote control panel and the ACS control cable



are connected directly to the connector block placed on the CLB.

Timeout Facility:

The turnstile has a pre-set timeout period (the passage waiting time) when the turnstile is unlocked for the passage in the permitted direction.
The passage waiting time in the pulse control mode is 5 seconds regardless of the signal length. In the potential control mode the passage waiting time equals the length of the control signal.

Power Failure:

The turnstile is powered from a regulated power supply unit 12V [DC@1A](#) (available upon request).
The turnstile retains the set position for each direction when the power supply voltage is removed - the open passage direction remains open, the closed passage direction remains closed.
An uninterruptible power supply (UPS) is required to secure off-line operation of the turnstile (available upon request).

Key override control:

The key override option allows the operating technician to unlock both directions of the TTR-04.1 turnstile if there is need to override the access control system or in case of emergency or power failure. The mechanical release lock is built into the turnstile housing as standard.
The lock is keyed.



Anti-panic folding arms:

The turnstile can be supplied with anti-panic arms (optional). Without any special keys or tools, the folding arm allows to clear the passageway in emergency situations. Under normal conditions the anti-panic arms function as standard barrier arms.



Available Colours and Finishes:

TTR-04.1R - sandpaper powder coating with pearl mica effect; light beige colour
TTR-04.1G - sandpaper powder coating with pearl mica effect; dark grey colour
TTR-04.1E - high quality powder coating plus lacquered finish; «starlit night» colour

Powder coating to colour of choice (according to RAL) is available. Time of manufacture and price quotation are specified individually.

Operational voltage	12V DC
Throughput rate (in the single passage mode)	30 persons/min
Overall dimensions (LxWxH)	
- housing	280 x 260 x 1050 MM
- housing with barrier arms	870 x 810 x 1050 MM
Passage width	600 mm
Operating temperature range	+1°C to +40°C

Delivery Details:

The turnstile in the original package should be transported in closed freight containers or in other closed type cargo transport units. During storage and transportation the boxes can be stacked no more than 5 layers high.

Installation Details:

Installation requires a steady and level concrete floor (grade 400 or higher) or a firm and rigid foundation at least 150mm thick.

The turnstile is delivered partly assembled. Installation should be

performed by a skilled installer only and in strict accordance with the manufacturer's instructions (supplied with the turnstile) and installation drawings.

Warranty:

The manufacturer guarantees that the TTR-04.1 turnstile complies with applicable statutory safety and electromagnetic requirements provided that the instructions on storage, installation and operation are observed.

The warranty period is 24 (twenty four) months commencing from the date of sale.

Installation Examples



Standard Delivery Set:

- turnstile housing
- built-in control logic board CLB
- barrier arms* (specified at time of order)
- built-in LED indication display
- cable remote control panel
- mechanical release lock with 2 keys
- overpack

*** Types of Barrier Arms:**

- standard barrier arms
- anti-panic folding arms

Available Options (supplied upon request):

- Regulated power supply 12V DC@1A
- Uninterrupted power supply 12V DC@1.5A and Battery backup 7Ah
- Wireless remote control kit with 2 tags (operation range of up to 40m)
- Intrusion detector
- Siren
- Anchor bolts

To Complete Design Solutions:

Styled in a Complete System Design, Railings match and easily integrate with PERCo turnstiles and wicket gates. More than 30 types of elements and standard modules allow to form passageways of any required configuration and style locations in a complete design.
