

# GAT Access 6100 F Access Control Terminal with Biometry

## Application

The GAT Access 6100 F with fingerprint reader GAT FR 055 is a stylish terminal for access control in leisure facilities such as swimming pools, spas and gyms. Identification at the terminal is by contact-free RFID data carrier (Radio Frequency Identification).

With the fingerprint reader GAT FR 055 access control is extended by verification with biometric data, which enables optimal protection against misuse of personal data carriers.

Information for user guidance is displayed via a graphical monochrome display (LCD).

## Function description

The GAT Access 6100 F reads contact-free data carriers and checks and grants authorisations. The user holds the data carrier over the round scan field and selects the required service via the acknowledge key. The integrated 4-segment LED display, monochrome LCD display and acoustic signal indicate authorisation.

Via the fingerprint reader GAT FR 055 the identification of the visitors is verified by comparing their fingerprints with the fingerprint templates (two templates per visitor) stored on the visitor's personal data carriers. The combination of RFID data carriers and fingerprints allows for optimal protection against misuse of data carriers.

For capturing the fingerprints and storing them to the data carriers the GAT Access 6100 F Enrollment Station is used.

## Highlights

- Activation of turnstiles, doors etc. via relay output
- Feedback input
- User guidance via monochrome display (LCD), 4-segment LED display, illuminated round scan field and beeper
- Secure data transmission between reader and data carrier
- Read/write frequency 13.56 MHz
- Reading MIFARE™ Standard data carriers
- Expandabilities for verification via fingerprint
- Opening of housing only possible with special tool
- Plug & Play installation



GAT Access 6100 F

Fingerprint reader  
GAT FR 055

## Order information

Description	PartNo.
<b>GAT Access 6100 F</b> Terminal for entry control with integrated, contactless MIFARE™ reader, with black-white display (LCD)	776487
<b>GAT FR 055</b> Fingerprint reader for GAT Access 6100 F, wall mounting	557433
<b>GAT FR 055 Weather Cover</b> Weather protection cover for GAT FR 055 and GAT FR 055 FIU 3k	174529

## Accessories

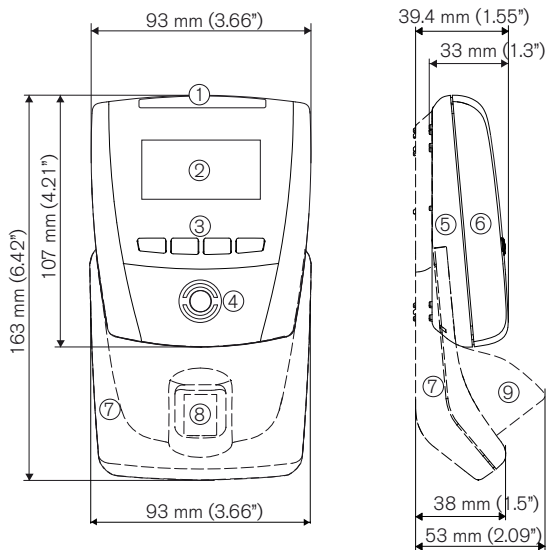
Description	PartNo.
<b>GAT Access 6100 F Enrollment Station</b> Table station for capturing fingerprints	174327
<b>GAT Reader WK</b> Tool to open the reader housing	581683

## Technical data

Nominal voltage:	12/24 VDC (SELV - safety extra-low voltage)
Permitted input voltage:	10 to 28 VDC
Aver. power consumption:	- Full operation sensor in: 4.5 W - Full operation sensor out: 3.5 W
Data storage:	Internal EEPROM memory for configuration and booking memory, data preservation min. 10 years
Internal clock:	Data preservation approx. 12 h (Gold-Cap)
Reader type:	MIFARE™ Standard
Frequency reading field:	13.56 MHz
GAT FR 055 sensor:	- Scanner type: optical sensor, 500 dpi @ 8-bit per pixel, active area: 13 x 20 mm - Verification time: < 0.8 sec. - Identification time: < 1 sec. - False acceptance rate 0.01% (recommended), adjustable over wide range
Display elements:	- Full graphical monochrome display (LCD) with white LED background lighting, resolution 128 x 64 pixels, visible area 50 x 25 mm - RFID reader (illuminated) - Acoustic signal - 4-segment LED display with different colours

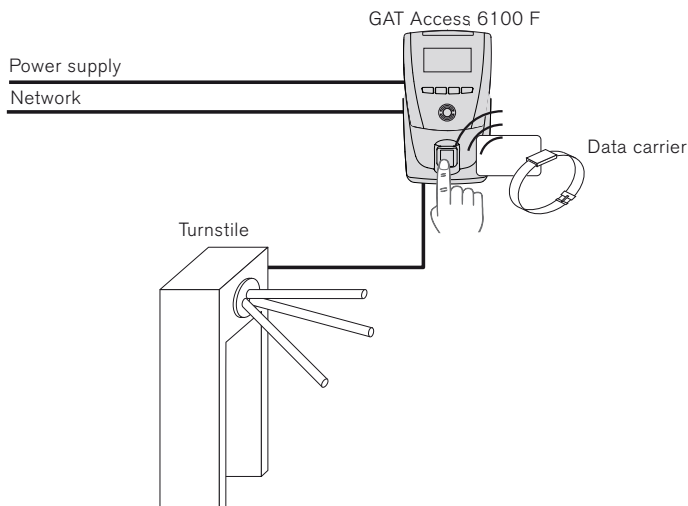
Control elements:	- 4 function keys - RFID reader
Host interface:	Ethernet 10/100 MBit/s
Signal inputs:	1 x optocoupler (configurable) - Input voltage: 0 to 30 VDC $U_{Low} < 2 \text{ VDC}$ , $U_{High} > 6 \text{ VDC}$ - Input current: 4.5 mA
Signal outputs:	1 x relay (configurable NO/NC) - Switching voltage: max. 30 VAC/DC - Continuous current: max. 2 A - Switching power: max. 60 VA
Connection terminals:	0.5 to 1.5 mm <sup>2</sup>
Housing material:	- GAT Access 6100 F: plastic - GAT FR 055: plastic
Permitted ambient temperature:	-10 to +55°C
Storage temperature:	-20 to +70°C
Relative humidity:	20 to 80%, non-condensing
Protection type:	IP 54
Protection class:	III
Weight:	0.2 kg
Environment class based on VDS 2110:	II (conditions in indoor areas)
Certifications of the GAT FR 055 finger scanner:	CE and FCC15

## Dimensions



1. 4-segment LED display
2. Monochrome display (LCD)
3. Function keys
4. Illuminated, round scan field
5. Device back part
6. Device upper part
7. Fingerprint reader GAT FR 055 (optional)
8. Fingerprint sensor of the GAT FR 055
9. Weather protection cover (optional)

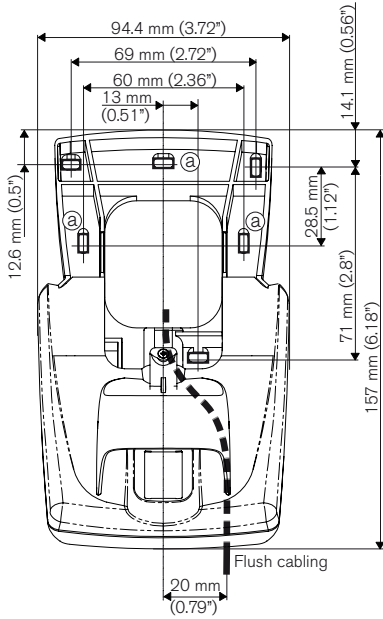
## Typical application



## Mounting and installation instructions

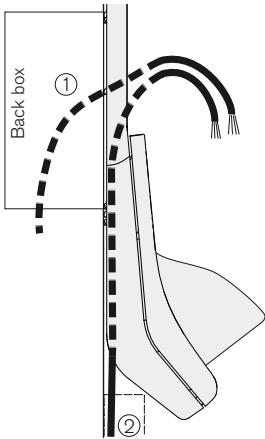
### 1. Mounting holes

Drill mounting holes on a flat background (e.g. concrete wall) according to the following dimensional drawing. Use the three holes labelled (a).



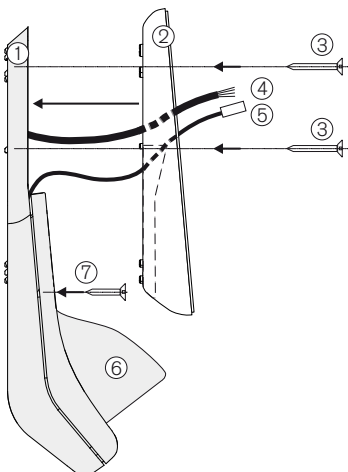
### 2. Connection cable

The connection cables (power supply, network etc.) are run through the cable lead-ins of the GAT FR 055. With concealed/flush wiring (1) the connection cables are fed from behind via the back box. With surface wiring (2) the connection cables must lie in the cable duct on the back part of the GAT FR 055.



### 3. Wall mounting

Pay attention when fixing to an uneven background that the GAT FR 055 housing and the device back part of the GAT Access 6100 F must not be distorted. Recommended mounting height: top edge of device 1.3 m.



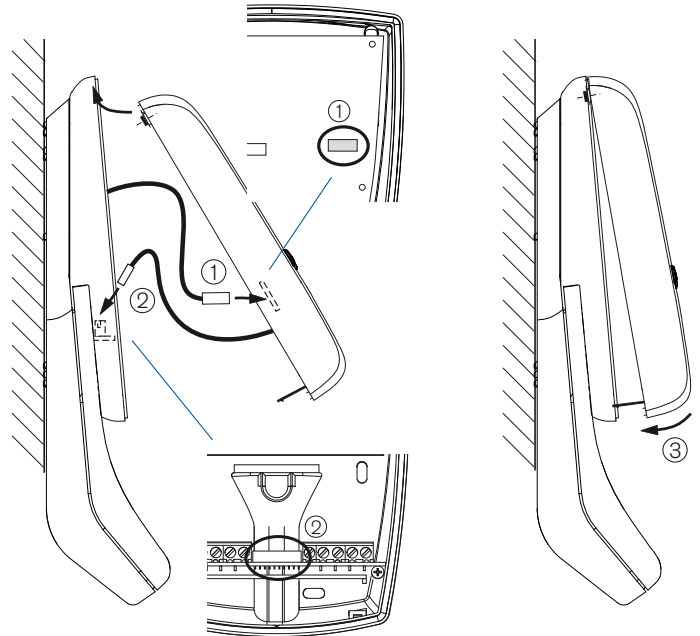
1. GAT FR 055
2. Device back part of GAT Access 6100 F
3. Fastening screws
4. Connection cable
5. Connection cable GAT FR 055 to GAT Access 6100 F
6. Weather protection cover (optional)
7. Fastening screws for weather protection cover

### 4. Electrical connection

The connection cables (see (4) in previous drawing) are connected at the device back part of the GAT Access 6100 F (see page 4).

### 5. Mounting of the GAT Access 6100 F upper part

The connection cable of the GAT FR 055 (1) is fixed into the housing upper part of the GAT Access 6100 F and the connection cable of the upper part (2) is fixed in the back part of the GAT Access 6100 F. After that the device upper part can be swung down into the back part (3).

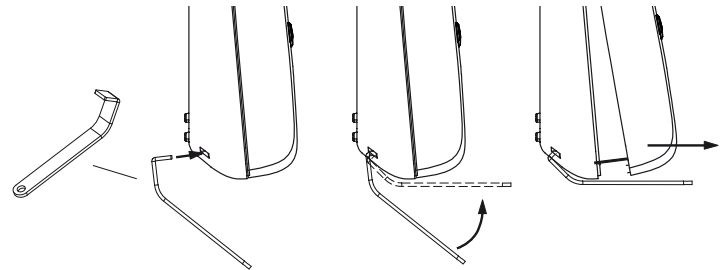


Check the sockets (1) and (2)! Dirt, dust and humidity must be removed so that a good contact of the connection cable is guaranteed. No aggressive detergent may be used. Please do not damage socket contacts.

**Attention:** Cleaning only in powerless state!

### 6. Open the GAT Access 6100 F upper part

The GAT Access 6100 F can only be opened with the supplied special tool! With this the two catches on the bottom of the device can be unlocked in succession.



### Maintenance

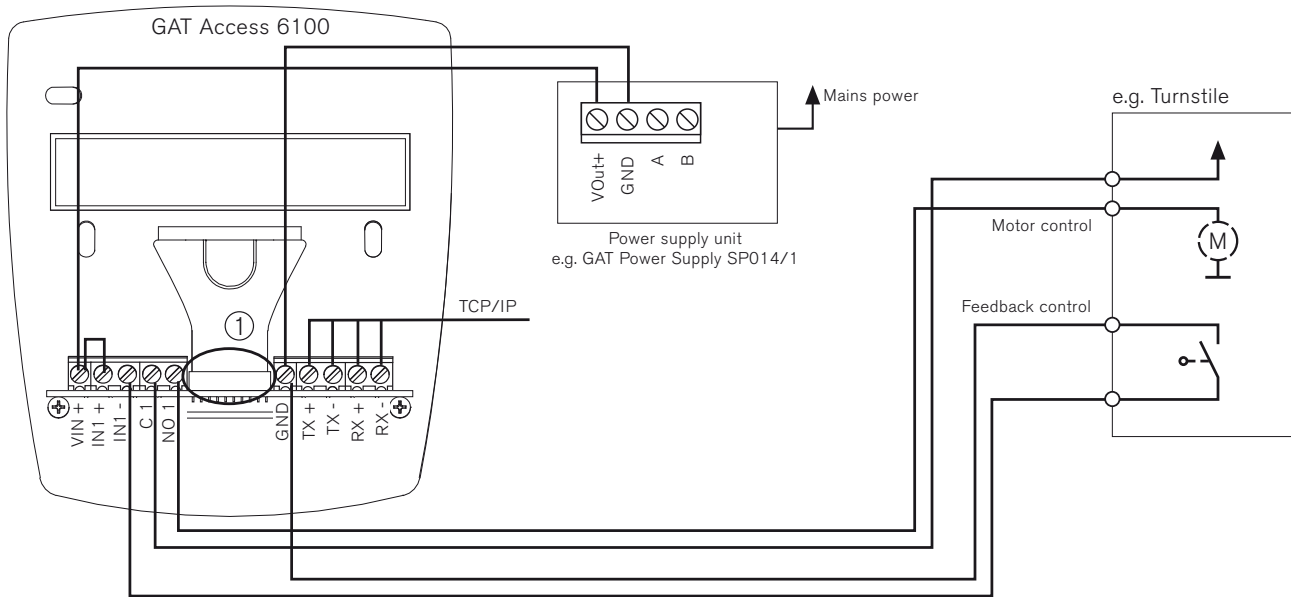
The sensor field of the GAT FR 055 should be cleaned from time to time so that finger prints can be clearly scanned.



For cleaning the sensor field always use a humid (not wet!) smooth cloth. No sharp or acidic detergents and no sharp materials must be used!

## Electrical connections

### TCP/IP with external power supply



#### Power supply

DC supply (see technical data), e.g. via GANTNER GAT Power Supply SP014/1. The power input is protected against reverse-polarity.

#### Network

Ethernet, connection via screw terminals.

#### Recommended cables

Ethernet: min. CAT 5 (STP) for 100 MBit

#### Ethernet wire colours

Ethernet 10/100 MBit

	568A	568B
TX +	green/white	orange/white
TX -	green	orange
RX +	orange/white	green/white
RX -	orange	green

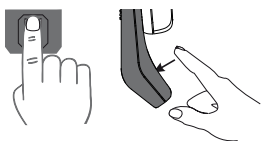
#### Usage of the fingerprint reader GAT FR 055

The sensor field will light-up red if a finger print must be scanned.

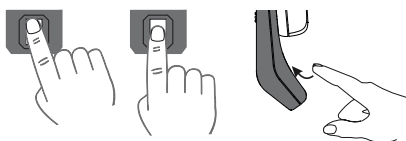
**Pay attention** that the finger is always pressed vertically onto the sensor field in order to guarantee an optimal scanning of the finger! Furthermore the finger should be laid rectangular onto the sensor field and touch the top edge.

See also the operating instructions of the GAT Access 6100 F.

Correct:



Incorrect:



#### Connection to the device upper part

**Attention:** The socket for the connection cable between the device back part and upper part (circle with the label (1) in the connection figure) must be clean in order to guarantee a good contact.

#### Relay output



For activation of devices like turnstiles etc., the relay contact is of type NO (maker contact). Please observe the max. permitted switching voltages and currents (see technical data).

Depending on the connected installation (e.g. turnstile) an additional free-wheeling diode may be necessary, which is used to limit the switch-on current. Please read the documentation of the connected installation.

#### Optocoupler input

Input for status acquisition. For using the input a supply voltage must be applied. This voltage can be taken from the terminal's supply or from an external power source. Please observe the max. permitted input voltages and currents (see technical data).

#### Safety instructions

-  - This device must be installed by qualified personnel only.
- The applicable safety and accident prevention regulations must be observed.
- Safety devices must not be removed.
- Please observe the technical data of the device specified on the data sheet.
-  - The device must be disconnected from the power supply prior to installation, assembly or dismantling.