

# Proxibus® CAx 411/412/413 CAx 421/422/423 Passenger Access Control Gates Advantages and Features



## Advantages

- Fully upgradeable solutions
  - Standard local network (LonWorks)
  - Powerful data processing capacity relating to the access control gate
  - Memory capacity
  - “Contactless” option and combined system available with “magnetic” technology
- Respect for standards
  - CEN 753 for magnetic tickets
  - ISO 14443 for contactless cards
  - LonWorks communication network
- Safety
  - Free passage in the event of power failure
  - Anti-panic systems fold-away turnstile arm (optional), panel opening sensor
- Modern design
- Complete range of barriers for equipping:
  - Stations with high passenger throughput with panel-type access control gates
  - Secondary stations with turnstile-type access control gates
  - “Open” suburban stations with platform validators
- High performance
  - Reliability: MCBF > 100,000 cycles
  - Passenger throughput 20 to 80/min depending on type of access control gate
  - Magnetic and contactless “combined” technology reader
- Know-how
  - 30 years of experience
  - Gate supplier for the biggest network in the world: the Mexico City metro (3,600 access control gates)
- More than 10,000 access control gates installed and operating world-wide
- Production capacity
  - Several hundred manufactured every month.

# Proxibus® CAX 411/412/413, CAX 421/422/423



Magnetic and contactless “combined” technology reader

## Operation

### Components

- Cabinet that combines with the adjacent control gate cabinet to form the access corridor
- Mechanism that controls the physical barrier (turnstile bar, panel)
- Control and monitoring device (magnetic card reader, contactless card validator)

### Operations Methods

- Magnetic travel card
- Contactless smart card
- Both combined

## The Following Product Codes Are Used:

- Proxibus CAB 411 Platform Validator, TFC0
- Proxibus CAB 412 Platform Validator, TFC1
- Proxibus CAB 413 Platform Validator, contactless
- Proxibus CAT 411 Turnstile, TFC0, one way
- Proxibus CAT 412 Turnstile, TFC1, one way
- Proxibus CAT 413 Turnstile, contactless, one way
- Proxibus CAT 421 Turnstile, TFC0, reversible
- Proxibus CAT 422 Turnstile, TFC1, reversible
- Proxibus CAT 423 Turnstile, contactless, reversible

## Reference Codes

The following characteristics determine reference codes for the access control gates. (Any cabinet type can be integrated with any barrier mechanism and any control device.)

### Dénomination des produits de la gamme

- Proxibus CAX 4yz

		X
Barrier	Platform Validator	B
	Turnstile	T
	Panels	V

		Y
Type	One way	1
	Reversible	2
	Not applicable	3

		Z
Technologies	Magnetic TFC0	1
	Magnetic TFC1	2
	Contactless	3

- Proxibus CAV 411 Panels, TFC0, one way
- Proxibus CAV 412 Panels, TFC1, one way
- Proxibus CAV 413 Panels, contactless, one way
- Proxibus CAV 421 Panels, TFC0, reversible
- Proxibus CAV 422 Panels, TFC1, reversible
- Proxibus CAV 423 Panels, contactless, reversible

NB: Control gates based on “magnetic” technology are either equipped with a “contactless” system, or designed to be so equipped later on.



Access control gates are designed to form a physical barrier between a free-access area and a controlled area for metro and rail applications.

## Functions

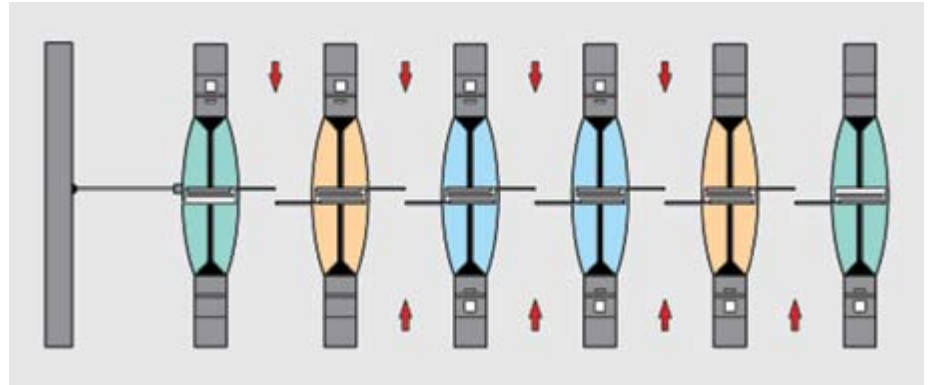
- The cabinet determines the access zone
- The cabinet mechanism controls the “physical barrier” (arm or panel) separating controlled zones from free-access zones
- The access control gate determines the various transit modes for each direction (controlled, free, locked)
  - In controlled mode, access may be:
    - Locked or unlocked for entry or exit (turnstile)
    - Normally closed or open (USG\*)
- The access control gate can be equipped with one or two ticket readers so gates can be configured in reversible mode
  - The magnetic reader processes tickets based on magnetic technology (reading, encoding, printing, return, cancellation, capture)
  - The antenna processes contactless smart cards (reading, writing, recycling)

The “recycle access control” function applies to the processing of contactless smart cards. The corresponding model is an access control gate that captures all “single ticket” cards in order to recycle for resale.

The advantage: lower operating costs compared to the magnetic technology recycling system.

Results of travel card processing:

- Controls gate status (open, close, keep open, keep closed)
- Gives user information on gate status (“pass through,” “gate locked”), travel card status (validity, balance, etc.)
- Highlights, via the gate passenger display, use of reduced-fare cards



Typical Metro Access Configuration

## Technical Characteristics

- Remote transmissions
- Integrated into a fare collection system, the access control gate is connected via a bidirectional link to the Station Concentrator and to the Operations and Data Processing Centre, through a high-speed local network:
  - In transmission mode, the access control gate transmits data on operations, validations, faults, etc.
  - In reception mode, the access control gate receives parameters (gate direction, fare table, gate configurations) and downloads software
- Electronics
  - Microprocessor
- Reader
  - Magnetic and contactless technologies: plug-in type, replaceable without tools
- Passenger display
  - 2 lines of 16 backlit characters, 8 mm high
  - 3 LEDs



Turnstile



Platform Validator



Recycle Access Control Gate

## Physical Characteristics of Cabinet

- Dimensions (in mm)

	Turnstile Cabinet	USG
Width	300	300
Length uni-directional	1400	1700
Length reversible	1800	2100
Height	1083	1000
Weight	80/95 kg (1)	220/280 kg (2)
Passage width	500	500
Height of barrier	780	200 to 12000/1700

## External Characteristics

- Types of ticket which can be used
- Connections: LonWorks, high speed (>78 kbauds)

Type	TFCo	TFC1	ID1 Type A	ID1 Type B
Technology	magnetic	magnetic	contactless	contactless
Printing (nb characters)	30	40		
Applicable standard	as per EN 753		as per ISO/IEC 14 443	

## Performance

- Throughput
- Pictograms
  - at either or both ends of the cabinet (green arrow, red cross, reduced-fare indicator)

Type of Cabinet	Tripode	PNG	Tripode	PNG
Technology	magnetic	magnetic	contactless	contactless
Average throughput (*) (passengers/min)	20 to 30	30 to 40	40 to 50	50 to 80

## Ancillary Equipment

- Special gate for the disabled
- Baggage gate (in turnstile version)

## Environment

- Power supply: 220 V ± 10% 50 Hz ± 2%
- Consumption: 600 W in operation, 100 W on stand-by
- Temperature: -15° C to +50° C

(\*) depending on ticket processing time  
 (1) uni-directional/reversible  
 (2) end stanchion/centre stanchion

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