Cardax Prox (125 Series)

Cardax Prox (125 Series) are powerful, cost effective, industry standard 125kHz proximity readers for Cardax systems.

The Cardax 125 Series readers are multimode readers supporting the widely available 125kHz proximity cards and transponders.

This enables Cardax Prox 125 readers to read both Cardax proprietary format, as well as a variety of Wiegand formats as provided by other reader manufacturers, such as Motorola, HID, Casi-Rusco and EM ASK.

Cardax primarily supports its own proprietary format, using Amplitude Shift Keying (ASK) modulation. When connected in the Cardax FT system, Cardax Prox 125 readers are also capable of reading the selected third party formats using Phase Shift Keying (PSK), and Frequency Shift Keying (FSK).

Any number of the supported card formats may be active concurrently within the Cardax FT system, using Cardax Prox 125 readers. This complete flexibility means it is possible for a site to integrate the use of Cardax readers with existing third party cards in the system.

The Cardax Prox (125 Series) includes the Cardax Prox and Cardax Prox Plus readers.

Cardax Prox (125 Series)

Cardax Prox (125 Series) with optional wide mounting base

The Cardax Prox 125 reader is a card only reader, providing fast, secure access by passing a card transponder across the face of the unit. Designed for use in both interior and exterior environments, the Cardax Prox 125 reader is also available in a hermetically sealed or "potted" version, with an enviromental rating of IP66.

Dual colour LED and speaker provide comprehensive visual and audible feedback to the user.

An optional wide mounting base is available for the Cardax Prox 125 reader, enabling the reader to be mounted over many standard international electrical flush boxes. The wide mounting base also provides increased protection for the reader.

Cardax Prox Plus (125 Series)

The Cardax Prox Plus 125 reader is a card plus PIN unit, used where more security than card only is required.

cardax

The illuminated PIN pad allows a cardholder to enter a personal identification number in conjunction with a card. An LCD panel provides user feedback icons making the system easy to use internationally.

The LED and speaker also provide enhanced visual and audible feedback to the user.

Data and Tamper Protection

The Cardax FT Controllers are the intelligent units that make all access control decisions in the field. Tamper protection between the Cardax Prox 125 readers and the Cardax FT Controllers is achieved by monitoring the communications data, based on a bi-directional protocol.

An alarm will be raised at the Command Centre workstation if the reader stops communicating.

With the Cardax proprietary formats, enhanced data protection is achieved via:

- data encryption on the card, adding a layer of security for card management

- encoding of issue level and region code in addition to facility code and card number, providing unique card data across global card databases

- using 8 bit error detection protocol, ensuring that the reader correctly identifies the card being presented by the cardholder.

High Performance Housing with Colour Choice

To suit a wide range of installation environments the reader housing is available in Cardax Cool Grey or Cardax Charcoal. The reader housing is injection moulded in a high strength, high impact resistant, engineering plastic alloy proven over many years in the Cardax product range.

The Cardax Prox Plus 125 and unpotted Cardax Prox 125 readers are rated to IP54. The Cardax Prox Plus 125 reader is rated to IP66 when used with the optional Cardax Protective Reader Cover.

Ancillary Products

Transponders

The transponder alternatives include card transponders, as well as a key fob option. Three card transponders are available: An ISO standard dimension (CR80 credit card size) printable card, with or without magstripe; and a lower cost clamshell card. These are electronically compatible to the industry standard cards as used by HID and Motorola / Indala readers.
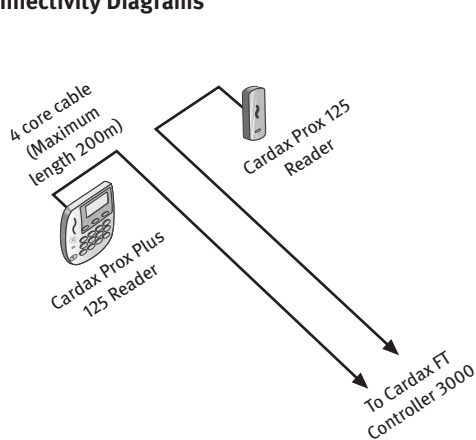
Card Encoding

Used in conjunction with the Cardax Encoder (125 Series), Cardax Encoder III is a user-friendly software package that enables the on-site encoding and re-encoding of Cardax proprietary format proximity cards.
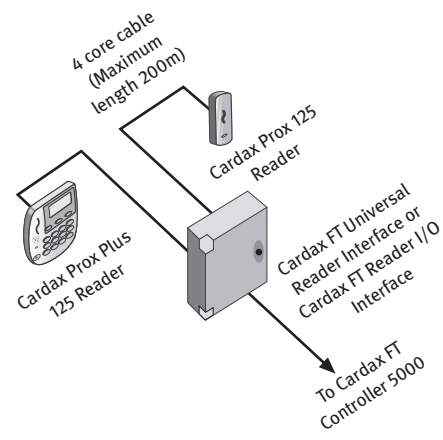
For more information about ancillary products, please visit www.cardax.com or refer to the respective Cardax data sheets:

- Cardax Encoder III for encoding Cardax proprietary format cards
- Cardax Protective Reader Covers

Connectivity Diagrams

4 core cable (Maximum length 200m)

Cardax Prox 125 Reader

Cardax Prox Plus 125 Reader

To Cardax FT Controller 3000

CONTROLLER 3000 — Cardax Prox 125 readers connecting to Cardax FT Controller 3000

4 core cable (Maximum length 200m)

Cardax Prox 125 Reader

Cardax Prox Plus 125 Reader

Cardax FT Universal Reader Interface or Cardax FT Reader I/O Interface

To Cardax FT Controller 5000

CONTROLLER 5000 — Cardax Prox 125 readers connecting to Cardax FT Controller 5000 via Cardax FT Universal Reader Interface or Cardax FT Reader I/O Interface

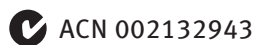| TECHNICAL SPECIFICATIONS	Cardax Prox (125 Series)	
Card Formats Supported	Cardax Proprietary Format	
	Wiegand formats: 26/12 bit, 26/8 bit, 27/13 bit, 36/14 bit. Using Command Centre Universal Card Format functionality – a variety of formats as provided by other reader manufacturers, such as: Motorola, HID*, Casi-Rusco and EM ASK.	
	* HID formats may not be available in some countries.	
	There is an unlimited number of possible card formats, and it is not possible to confirm all are supported. Any third party card format should be thoroughly tested for compatibility with these card readers. We may be able to assist by creating customisations to allow some card formats to be supported. Please contact Cardax Technical Support if you require further assistance with card formats.	
Reading Distance		Up to 100 mm*
	* Dependant on Installation and technology (FSK/ASK/PSK)	
Dimensions – Cardax Prox 125	Height	134 mm
	Width	55 mm
	Depth	31 mm
Dimensions – Cardax Prox 125 with optional cradle base	Height	156 mm
	Width	100 mm
	Depth	31 mm
Dimensions – Cardax Prox Plus 125	Height	112 mm
	Width	113 mm
	Depth	28 mm
Power Supply	Voltage	13.6V DC +/− 15%
	Current	
	Prox reader	80mA
	Prox Plus reader	150mA
	Note: Current increases momentarily during card reads.	
Temperature Range		-10° to +50°C
Environmental Protection Rating	Potted Readers	IP66
	Unpotted Readers	IP54
Mounting Surface		flat surface required
Cable Specifications	4 core twisted unshielded 24 AWG (max nominal cap 120 pF/m)	0.2mm^2
Max. Cable Length	to Cardax FT Universal Reader Interface	200m
	to Cardax FT Reader I/O Interface	200m
	to Cardax FT Controller 3000	200m
Method of Transmission		FSK, ASK or PSK at 125 Khz

Compliance Standards

All equipment complies with CE, C-Tick, UL and FCC approvals. Please contact Gallagher Security Management Systems for the latest list of approvals.

CE   ACN 002132943   UL LISTED 1HA7   FCC Federal Communications Commission

TECHNICAL SPECIFICATIONS	**Transponders**	
Dimensions – Cardax ISO without magstripe	Length Width Thickness	54 mm 85.6 mm 0.8 mm
Dimensions – Cardax ISO with magstripe	Length Width Thickness	54 mm 85.6 mm 0.8 mm
Dimensions – Cardax Clamshell	Length Width Thickness	54 mm 86 mm 2.2 mm
Dimensions – Key Fob Transponder	Length Width Thickness	30 mm 43 mm 4 mm
Encoding Data (Encoded via Cardax encoder package)	Region codes Facility codes Card numbers Issue Levels	16 50,000 15,999,999 15

www.cardax.com

GALLAGHER SECURITY MANAGEMENT SYSTEMS

www.gallaghersms.com

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Quality Endorsed Company
ISO 9001
Lic 14125

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