

# Gallagher Prox Readers Mifare Series



The Gallagher security system uses contactless Mifare Standard technology to provide the platform for its smart card access control reader range. The benefits of smart card technology include the ability to have multiple applications residing and operating independently on a single card with high-level encryption between card and reader.

## How does the Gallagher Smart Card system work?

Application data on a Mifare Standard card is stored in an EEPROM memory chip. The EEPROM memory for a Mifare Standard card (1k) is made up of 16 sectors. The EEPROM memory for a Mifare 4k card is made up of 39 sectors. Each sector can be used to store data for a different application. Sector 0 is normally used for the Mifare Application Directory (MAD). Typically Gallagher access control information resides on sector 15 but it can be located on any sector from 1-15. CSN card reading is supported as an alternative to sector reading.

The Gallagher Prox Mifare Reader range includes the Prox and the Prox Plus readers.



## Gallagher Prox Mifare Reader

- Card only reader - provides fast, secure access by simply passing a card transponder across the face of the unit.
- LEDs and a speaker provide enhanced visual and audible feedback to the user.
- Teardrop shaped reader - designed for use on standard door mullions, in both interior and exterior environments.

## Gallagher Prox Plus Mifare Reader

- Card plus PIN unit - designed for buildings where a higher level of security is required.
- An LCD panel provides user feedback icons making the system easy to use internationally.

## Data and Tamper Protection

Security of the reader is enhanced by encryption and monitoring of the communications data between the reader and the Gallagher Controller. An alarm will be raised at the Gallagher Command Centre workstation if the reader stops communicating with the field device.

Unlike many other proximity systems, the Gallagher Prox Mifare Reader uses a full 16 bit error detection protocol ensuring that the card reader correctly identifies the card being presented by the cardholder.

In addition to Mifare Classic security, the Gallagher system implements an optional layer of security, "Mifare Enhanced Security" (MES). MES helps protect against card cloning, denying access and raising alarms upon unauthorised card presentation.

## Other Smart Card Applications

Alongside access control, Gallagher Smart Cards can independently support up to 14 other applications (1k card) or 38 other applications (4k card) using Philips® Semiconductors contactless Mifare Standard technology.

Gallagher Mifare Encoder can encode Gallagher access control information onto existing Mifare Standard Cards using Cardax IV proprietary data format.

Smart Card technology is being applied in many industries in a wide range of applications. Mifare Card systems have been used in the following applications:

- Automatic Fare Collection
- Road Toll
- Airline Ticketing
- Banking Cards
- City Cards
- ID Cards
- University Cards
- Loyalty Schemes
- Park & Ride

## High Performance Housing

The reader housing is injection moulded in a high-strength, high-impact resistant engineering plastic alloy, proven over many years in the Gallagher product range. The Prox Mifare Readers are self-contained units which do not require external suppression components to comply with international EMC regulations.

## Ancillary Products

### ▪ Smart Cards

The Gallagher Smart Card system uses Mifare Standard 1k Smart Cards (S50) or Mifare Standard 4k Smart Cards (S70).

### ▪ Card Encoding

Using the Gallagher Mifare Encoder, Gallagher Smart Cards can be encoded and re-encoded on-site within Gallagher Command Centre.

### ▪ Protective Reader Covers

Designed to protect against vandals or harsh environments and compatible with the: T Series, Prox & Prox Plus Readers and Intelligent Door Terminals;

For more information about these ancillary products, please refer to their respective Gallagher data sheets:

- Gallagher Encoder III
- Cards, Keyfobs and Encoding

	Prox	Prox Plus
Dimensions (HxWxD)	105mm x 35mm x 17mm	112mm x 113mm x 28mm
Current	200 mA	225 Ma
Reading Distance	Up to 50mm*	Up to 70mm*
Environmental Protection Rating	Prox & Prox Plus - IP54, Prox & Prox Plus with Reader covers - IP66	
Voltage	13.6V DC +/-15%	
Temperature Range	-10° to +55°C	
Mounting Surface	Flat surface required	
Cable Specifications	4 core 0.2mm <sup>2</sup> 924 AWG twisted unshielded (120 pF/m) - 200m, 4 core 0.2mm <sup>2</sup> 924 AWG twisted shielded (120 pF/m) - 150m	
Frequency of transmissions	13.5 MHz	
Colour Options	Available in Grey or Charcoal	
Compliance standards	All equipment complies with CE, C-Tick, UL and FCC approvals. Please contact Gallagher for the latest list of approvals.	



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