



9292 Jeronimo Road
Irvine, CA 92618-1905

HID® FlexSmart™

607X Series Readers

INSTALLATION GUIDE

© 2007 HID Global Corporation. All rights reserved.

February 5, 2006
Document Number 6075-900
Document Version B.2



Contents

1	Overview	3
2	Mounting	4
3	Wiring	5
	Regulatory	7
	Models	7
	Contact	8

List of Figures

Figure 1 Reader Dimensions and Mounting.....	4
Figure 2 Keypad Reader Dimensions and Mounting	5



1 Overview

1.1 Introduction

The HID® FlexSmart™ readers can easily be configured at the site because the readers' bezel can be interchangeably snapped onto the common reader module (only standard reader).

The FlexSmart readers mount on any North American standard electrical gang box or on any flat surface, with snap-on bezels.

1.2 Parts Included

First, unpack the contents and become familiar with the components.

The following items will be included with FlexSmart readers:

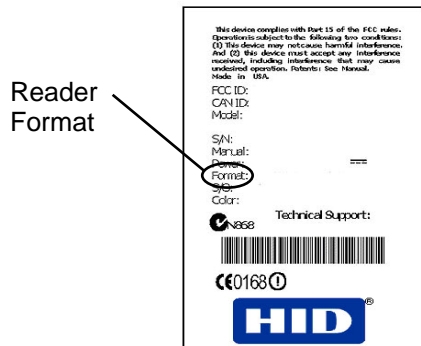
1. Installation Guide
2. MIFARE reader module for Slim or Wall switch
3. Cover Bezel (reader only)

1.3 Specifications

Supply Voltage	9VDC to 16VDC
Supply Current	15 / 75mA Keypad 25 / 100mA
Input	1-line LED (red/green), 1-line buzzer
Output formats	Wiegand/ABA, Application dependant
Operating Frequency	13.56MHz, 106kBaud
Data Transmission	Contactless
Operating Temperature	-25°C to +55°C
Non-Operating Temperature	-40°C to +70°C
Operating Humidity	5% to 95% condensing
Finish	Black (Standard)
Dimensions	4.30" x 1.5" x .72" (10.9 x 3.8 x 1.8 cm) 4.70" x 2.9" x 1.1" (11.9 x 7.4 x 2.8 cm)
Weight	4 oz (113g) keypad 12 oz (340g)

1.4 Identifying the Reader Format

The reader format is found on the ID label (see below), which is located on the reader electronics module.



2 Mounting

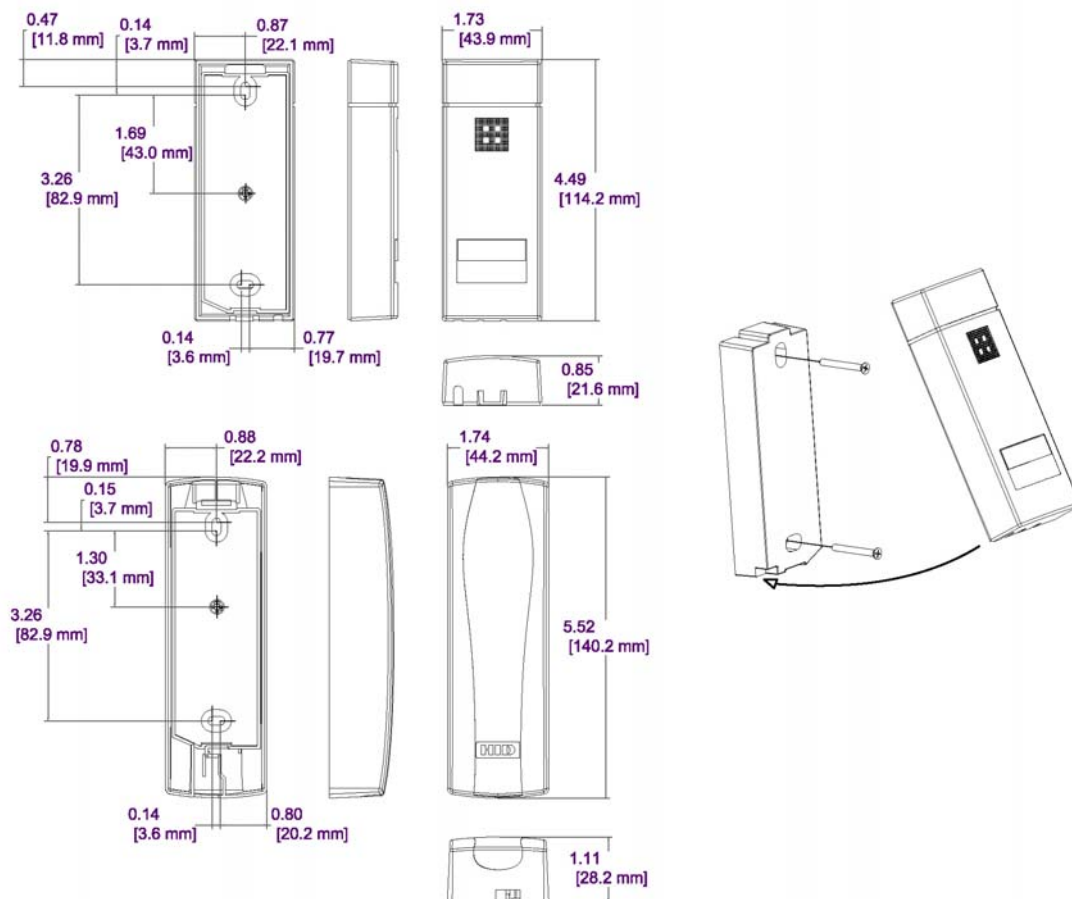


Figure 1 Reader Dimensions and Mounting

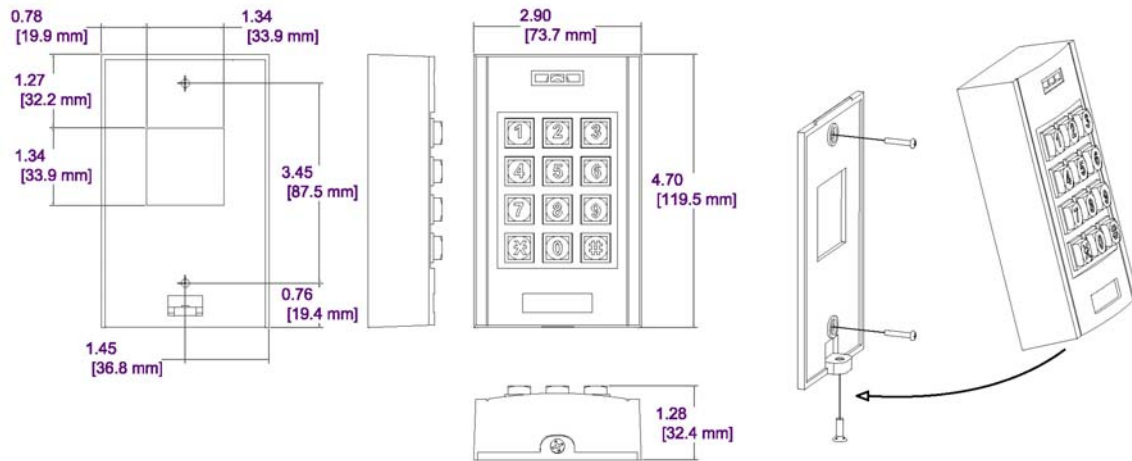


Figure 2 Keypad Reader Dimensions and Mounting

2.1 Mullion Mounting

The following describes how the readers mount to a mullion.

1. Drill two holes 6-32 or M-3 sheet metal or thread forming screws 3.3" (8.38 cm) apart.
2. Locate and drill a 0.375" (0.95 cm) hole for the reader cable.
3. Route the cable through the center hole to the controller.
4. Using the two 6-32 or M-3 screws, attach the reader to the first two mounting holes.
5. Once the reader module is screwed in place, snap on the bezel.

3 Wiring

3.1 Cable Types and Maximum Lengths

The MIFARE readers require a minimum voltage of 9.0 VDC. Voltage drops, caused by the cable resistance, can be made by increasing the power supply voltage.

CAUTION: DO NOT SET THE POWER SUPPLY VOLTAGE TO HIGHER THAN 16 VDC.

CAUTION: DO NOT USE CABLES WITH GAUGES SMALLER THAN 24 AWG:

The following are recommended cable types and maximum cable lengths for a cable connecting the power supply to the reader.

Cable Type	Maximum Cable Length
24 AWG (0.60mm), three conductors, with an overall foil shield, 9533 or equivalent.	200' (61 m)
22 AWG (0.80mm), two conductors, with an overall foil shield, Alpha 5192 or equivalent.	300' (91 m)
18 AWG (1.20mm), two conductors, with an overall foil shield, 5836 or equivalent.	500' (152 m)

The following are recommended wiring types at various maximum distances. Variations in distances require different wire gauges, because of system data termination differences. Contact your system manufacturer for its exact requirements. Installation should be in accordance with National Electric Code ANSI/NFPA 70.

Cable Type	Maximum Cable Length
22 AWG (0.80mm), six or eight conductor, with an overall foil shield, Alpha 5196, 5198 or equivalent.	500'(152 m)
18 AWG (1.20mm), six or eight conductor, with an overall foil shield, Alpha 5386, 5388 or equivalent.	500' (152m)

3.2 Grounding

Connect the reader directly to an earth ground (an earth ground can be established by driving a copper clad ground rod into the earth). Make certain the DC resistance between your established earth ground and the system ground is 50 Ohms or less. If a direct connection to a ground rod is not possible, connect the reader to an earth grounded cold water metal pipe (*do not connect to a copper fire sprinkler system because it may have non-conductive couplings*) or steel frames (*building beams*) that connect to earth. Connection of the shield/drain to an earth ground will provide greater ESD protection of the reader.

Prevent ground loops by connecting both the cable shield and the negative line of the power supply to one common earth ground point. Connecting different points to separate earth grounds may result in a ground loop.

Note: For the heavy duty keypad readers, the Shield/drain wire should be floating at the power supply.

Note: Ground loops may cause poor read range and communication line interference, resulting in no code or improper code seen by the controller.

Reader Defaults		
Card read (LED, beep & backlight)		
One-line control (bi-colour LED)		
Keypad Defaults		
Key-press (LED, beep & backlight)		
1 0001	2 0010	3 0011
4 0100	5 0101	6 0110
7 0111	8 1000	9 1001
⊕1010	0 0000	# 1011

Reader Wiring	
Red	+12Vdc
Black	0Vdc
Green	Data 0/Strobe
White	Data 1/Data
Brown	LED Control
Blue	Beeper Control
Orange	Not Used
Shield/drain	Door controller earth ground



Notes:

- Keypad outputs only available
- The system must have a single earth ground point.
- As shown, *do not connect shield (screen) wire at reader cable splice.*
- For open collector (*non-terminated output*), consult your system manufacturer for correct cable length and type.

Regulatory

FCC

This device complies with part 15 of the FCC rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

UL

This reader is intended to be used with UL294 Listed Control Equipment.

CE

Hereby, HID declares that this proximity reader is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

Models

Readers

6075 HID Format MIFARE Reader

6076 Custom MIFARE Reader

6077 Custom DESFire Reader

Keypad Readers

6071 HID Format MIFARE Reader

6072 Custom MIFARE Reader

6073 Custom DESFire Reader



Contact

Americas

HID Corporation (California, USA)
Email: tech@hidcorp.com
main: (949) 598-1600
support: 1-800-237-7769
fax: (949) 598-1690

Europe, Middle East and Africa

HID Corporation, Ltd. (Haverhill, UK)
email: eusupport@hidcorp.com
main: +44 (0) 1440 714 850
support: +44 (0) 1440 711 822
fax number: +44 (0) 1440 714 840

Asia-Pacific

HID Asia Pacific Ltd. (Hong Kong)
email: asiasupport@hidcorp.com
main: (852) 3160 9800
support: (852) 3160 9802
fax : (852) 3160 4809