

ACTpro Readers

Installation Guide



VANDERBILT

Document ID: A-100505

Edition date: 31.05.2018

Data and design subject to change without notice. / Supply subject to availability.

© 2018 Copyright by Vanderbilt International Ltd.

We reserve all rights in this document and in the subject thereof. By acceptance of the document the recipient acknowledges these rights and undertakes not to publish the document nor the subject thereof in full or in part, nor to make them available to any third party without our prior express written authorization, nor to use it for any purpose other than for which it was delivered to him.

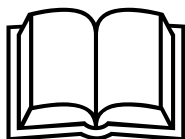
Hereby, Vanderbilt International (IRL) Ltd declares that this equipment type is in compliance with the following EU Directives for CE marking:

- Directive 2014/30/EU (Electromagnetic Compatibility Directive)
- Directive 2014/53/EU (Radio Equipment Directive)
- Directive 2011/65/EU (Restriction of the use of certain hazardous substances Directive)

The full text of the EU declaration of conformity is available at: <http://van.fyi?Link=DoC>



DA
DE
EN
ES
FR
IT
SV



http://van.fyi/?Link=ACTpro_Readers

Table of Contents

- 1 Overview 4**
 - 1.1 Product description 4
 - 1.2 Technical specification 4
 - 1.3 Reader connections 5
 - 1.3.1 ACTpro EM1040/EM1050/EM1060 5
 - 1.3.2 ACTpro EM1030 6
 - 1.3.3 CAT5/6 colour code 6
 - 1.4 Wiring for ACTpro 7
 - 1.4.1 Clock & Data entry reader 7
 - 1.4.2 Clock & Data exit reader 7
 - 1.4.3 Wiegand entry reader 8
 - 1.4.4 Wiegand exit reader 8
- 2 Mounting instructions 9**
 - 2.1 EM1030 9
 - 2.2 EM1040/ EM1050/ EM1060 9
 - 2.2.1 Surface mount 9
 - 2.2.2 Flush mount 10
 - 2.2.3 Flush mount to UK pattress box 10

1 Overview

This guide describes the following products:

- EM1030 ACTpro Mullion Reader
- EM1040 ACTpro Reader
- EM1050 ACTpro Reader with keypad
- EM1060 ACTpro keypad

1.1 Product description

ACTpro RFID readers are 125Khz readers that support all ACT RFID cards and fobs and HID-compatible tokens.

- Compatible with Vanderbilt RFID cards and fobs.
- Compatible with HID Clock and Data and Wiegand cards/fobs.
- Features a buzzer and an LED indication.
- Can be configured for Wiegand or Clock and Data output.
- Compatible with all standard access control systems.

1.2 Technical specification

	EM1030	EM1040	EM1050	EM1060
Connections	Pigtail 3 M	Terminal Block	Terminal Block	Terminal Block
Dimensions W x H x D	37 x 120 x 15mm	95 x 128 x 19mm	95 x 128 x 21mm	95 x 128 x 21mm
Mounting	Mullion	Flush or Surface	Flush or Surface	Flush or Surface
Weight	50g	142g	155g	155g
Power Supply	5V DC – 12V DC	5V DC – 12V DC	5V DC – 12V DC	5V DC – 12V DC
Current Consumption	75mA	75mA	100mA	75mA
Operating Temperature	-40°C to +50°C	-40°C to +50°C	-40°C to +50°C	-40°C to +50°C
Transmit Frequency	125Khz	125Khz	125Khz	NA
Keypad	No	No	Yes	Yes
Environmental Rating	IP67	IP67	IP67	IP67
Cable Distance	100m	100m	100m	100m
Output Formats	Wiegand or Clock & Data	Wiegand or Clock & Data	Wiegand or Clock & Data	Wiegand or Clock & Data

	EM1030	EM1040	EM1050	EM1060
Indoor & Outdoor	Yes	Yes	Yes	Yes
Card & PIN	Proximity only	Proximity only	Proximity & PIN	PIN only
Standards	CE Certified	CE Certified	CE Certified	CE Certified

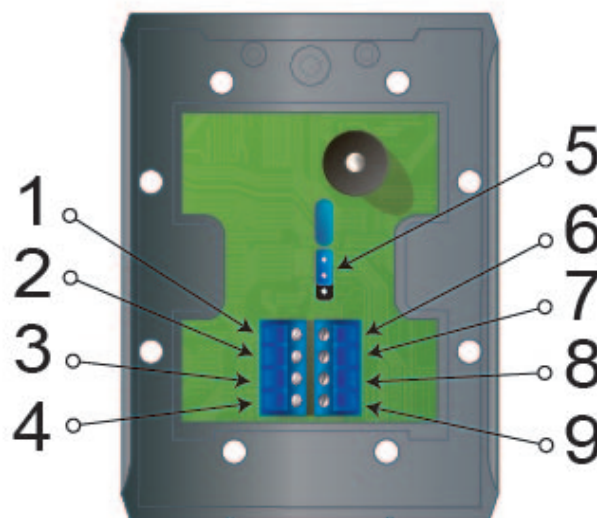
**IMPORTANT:**

ACTpro readers must be powered from a fused DC PSU (5-12V, 1A maximum).

If the ACTpro reader is used in a manner not specified in this document, the protection provided by the reader may be impaired.

1.3 Reader connections

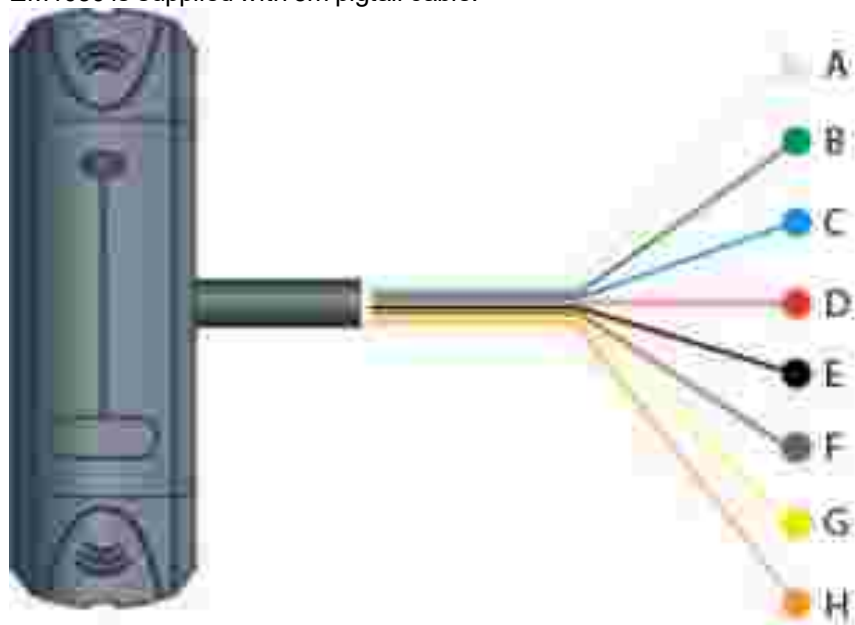
1.3.1 ACTpro EM1040/EM1050/EM1060



1	5-12V DC	6	0V/GND
2	Data/D0	7	RED LED
3	CLOCK/D1	8	GREEN LED
4	SENSE	9	BUZZ CTRL
5	EM1050/EM1060 Backlight Select Top PINS = Backlight On Bottom PINS = Backlight Off		

1.3.2 ACTpro EM1030

EM1030 is supplied with 3m pigtail cable.



A	SENSE (White)	F	RED LED (Brown)
B	CLOCK/D1 (Green)	G	GREEN LED (Yellow)
C	DATA/D0 (Blue)	H	Buzzer (Orange)
D	+12V (Red)		
E	0V/GND (Black)		

1.3.3 CAT5/6 colour code

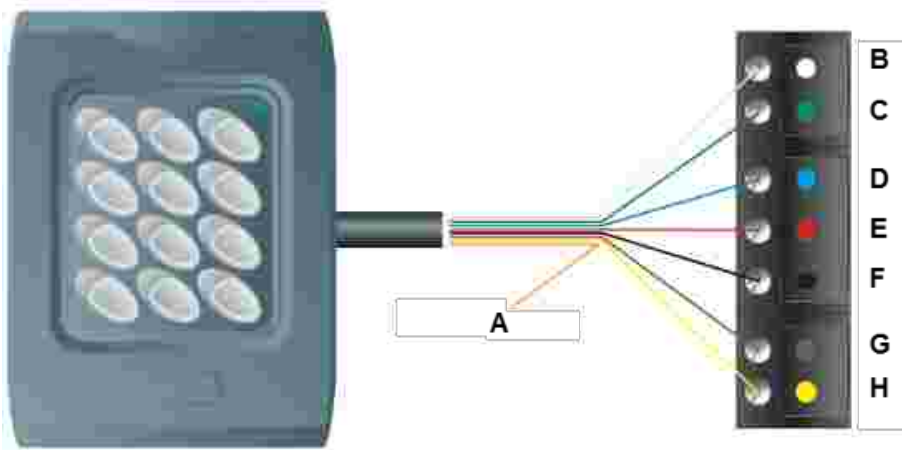
The following is the suggested colour coding if using CAT5 or CAT6 cabling.

Reader Output	Colour
Sense	White/Green
Clock / D1	Green
Data / D0	Blue
+12V	Orange
(0V) GND	White/Orange
Red LED	Brown
Green LED	White/Brown

1.4 Wiring for ACTpro

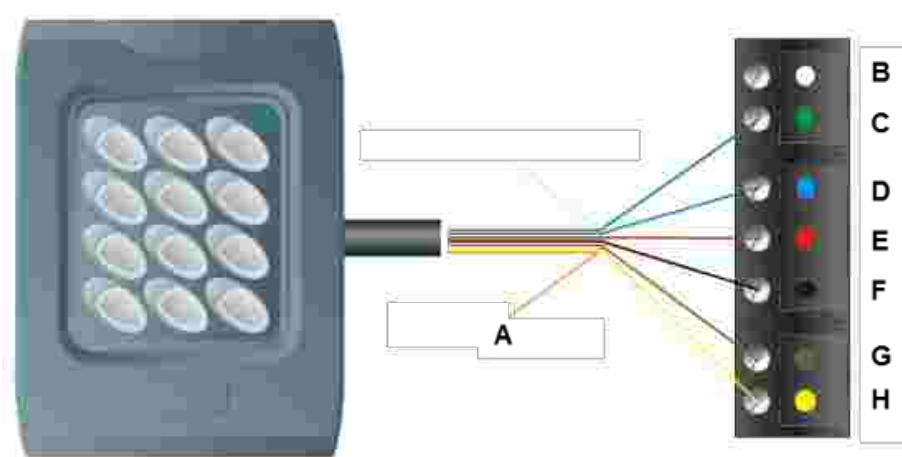
Note: Illustrations apply to all ACTpro Readers.

1.4.1 Clock & Data entry reader



A	Buzzer input	E	+12V (Red)
B	SENSE (White)	F	0V / GND (Black)
C	CLOCK / D1 (Green)	G	RED (Brown)
D	DATA / D0 (Blue)	H	GREEN (Yellow)

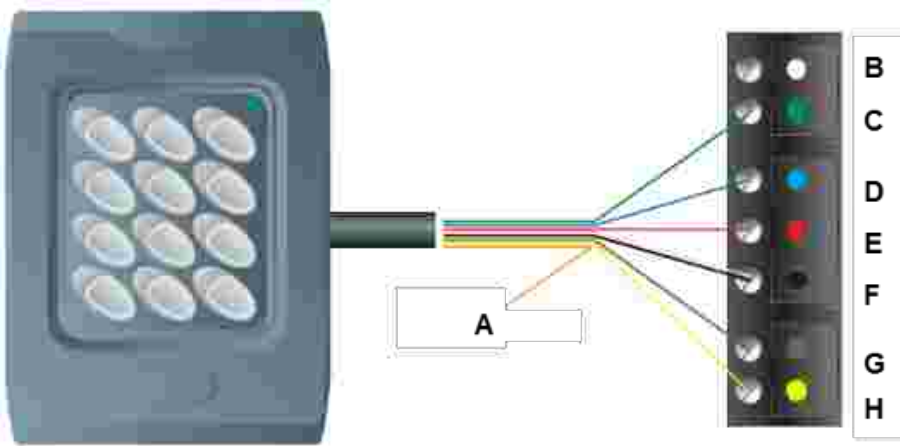
1.4.2 Clock & Data exit reader



A	Buzzer input	E	+12V (Red)
B	SENSE (White) – DO NOT CONNECT SENSE	F	0V / GND (Black)
C	CLOCK / D1 (Green)	G	RED (Brown)
D	DATA / D0 (Blue)	H	GREEN (Yellow)

1.4.3 Wiegand entry reader

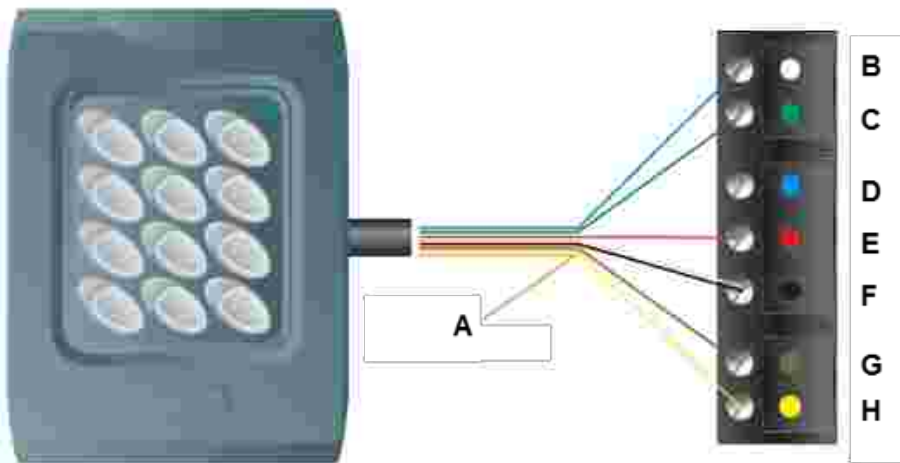
IMPORTANT: To put ACTpro readers into Wiegand, mode connect the SENSE on the reader to 0V/GND.



A	Buzzer input	E	+12V (Red)
B	SENSE	F	0V / GND (Black, White)
C	CLOCK / D1 (Green)	G	RED (Brown)
D	DATA / D0 (Blue)	H	GREEN (Yellow)

1.4.4 Wiegand exit reader

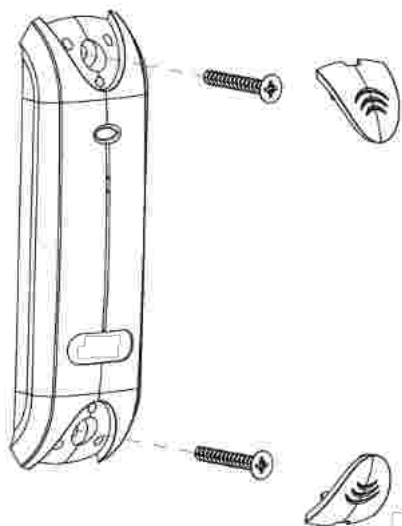
IMPORTANT: To put ACTpro E readers into Wiegand mode, connect the SENSE on the reader to 0V/GND PIN and DATA/D0 to the SENSE PIN on the controller.



A	Buzzer input	E	+12V (Red)
B	SENSE (Blue)	F	0V / GND (Black, White)
C	CLOCK / D1 (Green)	G	RED (Brown)
D	DATA / D0	H	GREEN (Yellow)

2 Mounting instructions

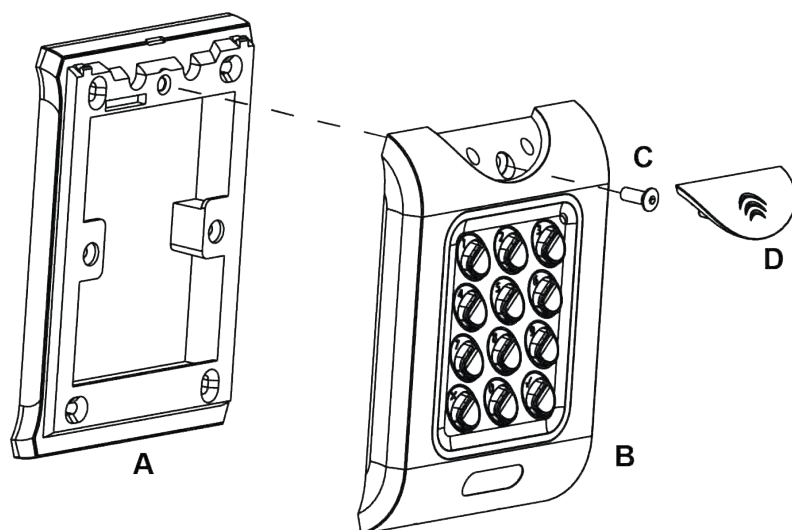
2.1 EM1030



Screw unit to the surface. Place caps on to the unit and push firmly into place.

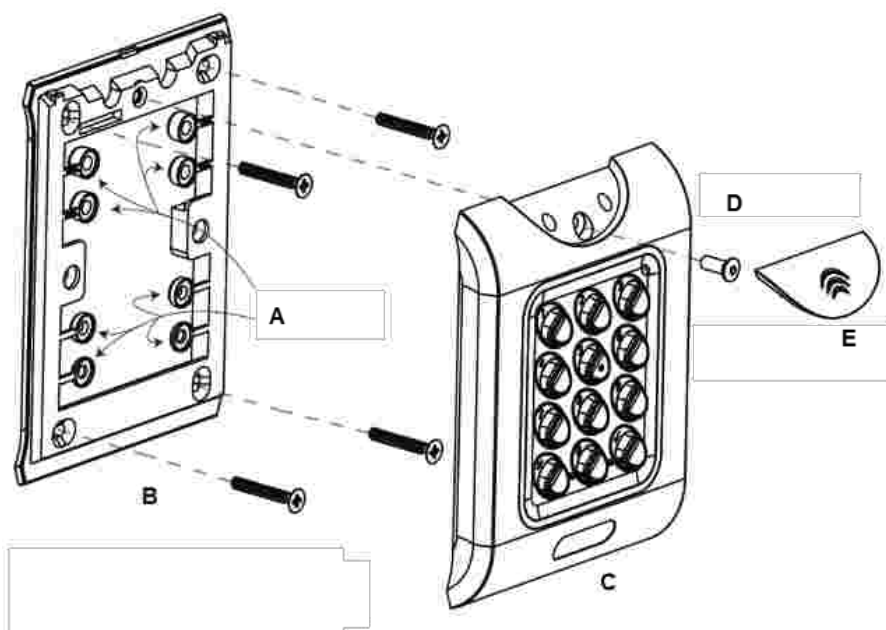
2.2 EM1040/ EM1050/ EM1060

2.2.1 Surface mount



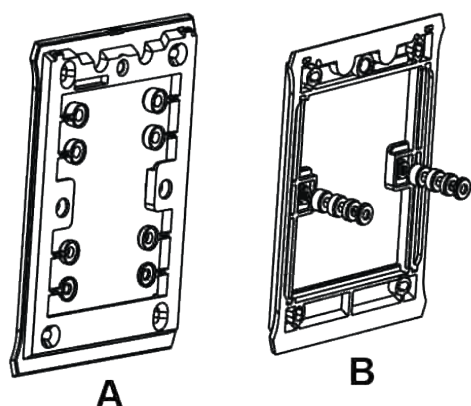
- | | |
|----------|--|
| A | Mount the surface mount collar on the wall using the fixing kit supplied in the box. |
| B | Place the reader/keypad onto the surface mount collar and clip down into place. |
| C | Use the security screw supplied to attached the unit to the surface mount collar. |
| D | Place the cap onto the unit and push firmly in place. |

2.2.2 Flush mount



A	Remove spacers before mounting.
B	Prepare the mounting surface to receive sub-surface terminals. Mount the flush mount collar on the wall using the fixing kit supplied in the box.
C	Place the reader/keypad onto the surface mount collar and clip down into place.
D	Use the security screw supplied to attached the unit to the flush mount collar.
E	Place the cap onto the unit and push firmly in place.

2.2.3 Flush mount to UK pattress box

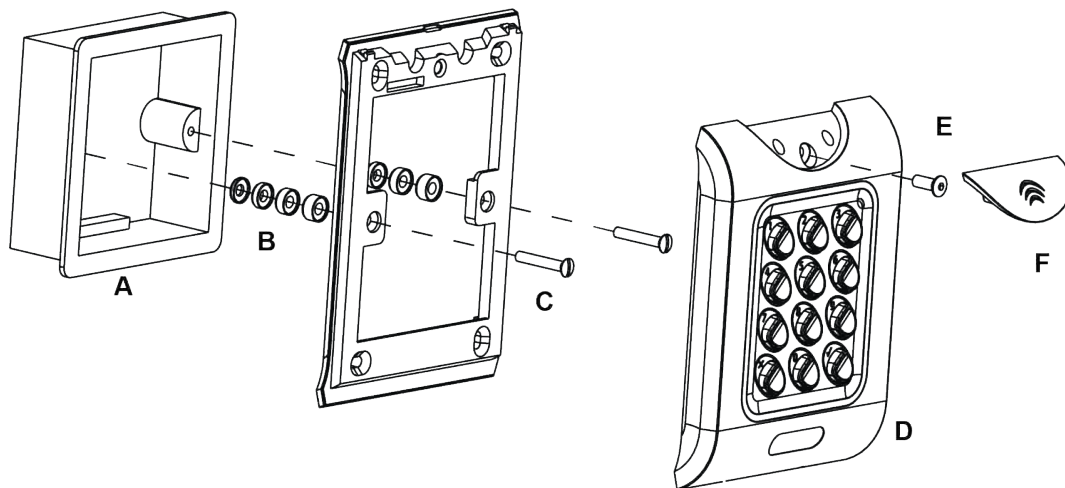


Spacers break away from the main component when required by installer for use.

Determine the distance between the pattress box and the mounting plate using the spacers. The spacers are labelled 1mm to 4mm. A spacer of the correct length is assembled by stacking the spacers together.

View **A** shows mounting plate before spacers are broken away by installer.

View **B** shows spacer stacking.



A	Standard pattress box.
B	Attach the mounting plate to the pattress using the screws supplied (C).
C	Ensure the correct spacers (B) have been used to bridge the gap between the mounting plate and the fixing wings of the pattress box to avoid the mounting plate being distorted.
D	Place the reader/keypad onto the surface mount collar and clip down into place.
E	Use the security screw supplied to attached the unit to the flush mount collar.
F	Place the cap onto the unit and push firmly in place.



© Vanderbilt 2018

Data and design subject to change without notice.

Supply subject to availability.

Document ID: A-100505

Edition date: 31.05.2018

VANDERBILT

vanderbiltindustries.com

 @VanderbiltInd

 Vanderbilt Industries

Issued by **Vanderbilt International Ltd.**

Clonshaugh Business and Technology Park

Clonshaugh, Dublin D17 KV 84, Ireland

 vanderbiltindustries.com/contact