Installation Note

HD500-2-GP Heavy Duty Reader

IN00125

The HD500-2 Reader must be connected to a power supply and to a host access control system.

Mounting and connecting

1. Choose a suitable position to mount the Reader near the door.

   The Reader has a range of 5cm to 25cm (2in to 10in) dependent on the type of tag used, so it must be mounted in a position where the card or tag can easily be brought within this distance. We recommend it is mounted approximately one metre (3.5ft) above the ground. Also consider ease of access to the door once the card or tag has been read, for example, it is better to mount the Reader near the opening side of the door rather than the hinge side.

2. You can mount the Reader using any of the six mounting holes in the black plastic enclosure - the diagram at the back of this Installation Note shows the fixing dimensions and is drawn actual size so you can use it as a template when drilling the holes.

   The Reader should be mounted with the strip of LEDs at the top left.

   Note that you do not need the stainless steel frame when mounting the Reader - you fasten it to the Reader afterwards to prevent anyone undoing the mounting screws.

3. Mark out and drill the mounting holes, but **don't fix the Reader to the wall yet**.

   The holes accept 4mm machine screws or No 8 wood screws.

4. The connections required for the Reader are power supply connections (0V and +12V DC or +24V DC), data output connections for Wiegand or Magnetic Stripe (D0, D1, DA) or ASCII/TTL (H, D0, DA), and a connection from the host to the Data Hold input (H) if data lines from two Readers are to be connected in parallel.

   To promote EMC compliance we recommend you use 812 Cable as described here. Trim back and insulate the screens at the HD500-2. Connect the screens at the host only: do not connect any of the screens to the HD500-2.

Route the cables into the Reader from behind, then make the connections shown in the table below.

Reader	Function
V+	Power supply +12V unregulated or 24V battery-backed* (absolute max 32V, min 10.6V, 100mA max)
0V	Power supply 0V (-ve) (also ground reference for data output)
H (C)	"Data Hold" for Wiegand and Mag Stripe, "CTS" for ASCII/TTL
D0 (D)	"Data Zero" for Wiegand, "Data" for Mag Stripe, "TXD" for ASCII/TTL
D1	"Data One" for Wiegand, "Strobe" for Mag Stripe
DA	"Data Available" for Wiegand, "Present" for Mag Stripe, "RTS" for ASCII/TTL
HRN (Adr)	Horn - 0V to sound, +5V to turn off
R	Red LED control - 0V for red LED
R/G	Single wire LED control - 0V for green LED, +5V for red LED
TAMPER	Tamper circuit connection (hard wired link)#

*The HD500-2 is designed to be operated by 12V unregulated power supplies, or 24V battery-backed power supplies. Operating voltage range is 10.6 to 32.0V. The upper voltage is intended to be compatible with the charging of 24V lead-acid batteries. Charge methods vary, and may be temperature dependent. 32V max is intended to be compatible with commonly used charging methods. If the upper operating voltage is exceeded then permanent damage may be caused. Installers and systems designers should check the max power supply voltage under all conditions. Do not operate the HD500-2 using unregulated 24V supplies. The HD500-2 current consumption can be significantly less than 100mA. The unloaded peak voltage from a nominal 24V unregulated supply will exceed the absolute max.

#Two terminals are provided for use with a system 24hour tamper protection circuit.

5. Route the cable neatly then fix the Reader to the wall or door frame.

6. **Do <u>not</u> fit the stainless steel frame to the Reader until you have configured it and tested it** (see the Proximity Readers Handbook HB00117).

7. When you have configured the Reader and tested it to make sure that it is working correctly, you can fasten the Reader's stainless steel frame using the four "Resistorx" M4x12 screws provided. These tamper-resistant screws can only be inserted or removed using the correct tool which is not supplied with the Reader: it can be obtained from Bewator Ltd as part number TX-20H.

Mount the HD500-2 Reader in a suitable position near the door approximately 1m from the floor with the LEDs at the top left. You can fasten the Reader's plastic case to the wall or door frame using any of the six mounting holes provided, as shown in the diagram below: