

Matrix Technical Support Mailer

Connection of External Reader to Main Controller

Dear Friends,

This script will help the Matrix installer to connect all types of External readers with the Main Door Controller and also install the hardware in some special cases as discussed in this script.

Following screenshots shows all the product variants.



FCS



FOS



FOP



FCP



CAP



CAS



CA



FC

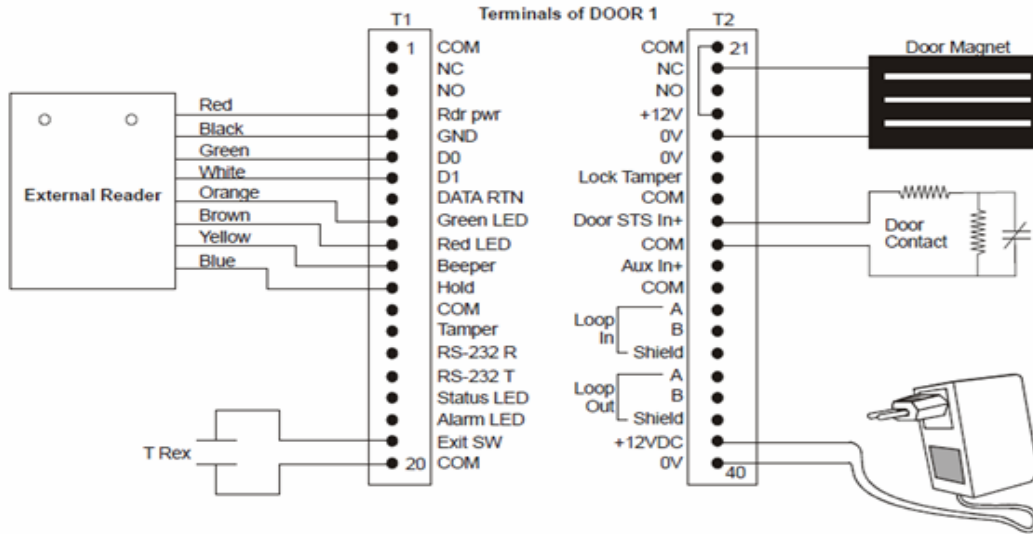


FO

First of all let us see the pin configuration of both premium and standard models.

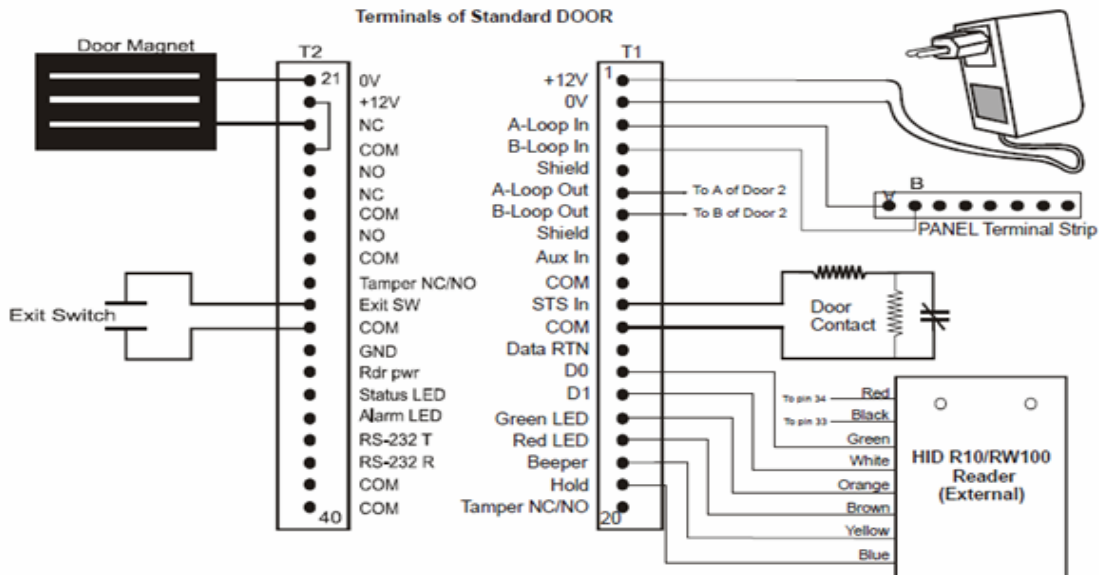
The pin configuration of the premium model is as shown below.

Connection Diagram For COSEC Door (Premium)



The pin configuration of the standard model is as shown below.

Connection Diagram for COSEC PANEL DOOR (Standard)



Now we will see how to connect external reader, EM lock and exit switch to the main controller.

Exit Switch

For exit switch you need to connect two wires of the switch to the exit switch terminals of the door.

For premium model they are pin 19 and 20. For standard model they are pin 31 and 32.

When the exit switch terminals get shorted, the door lock relay is triggered and lock is opened.

EM (Electro Magnetic) Lock Connection

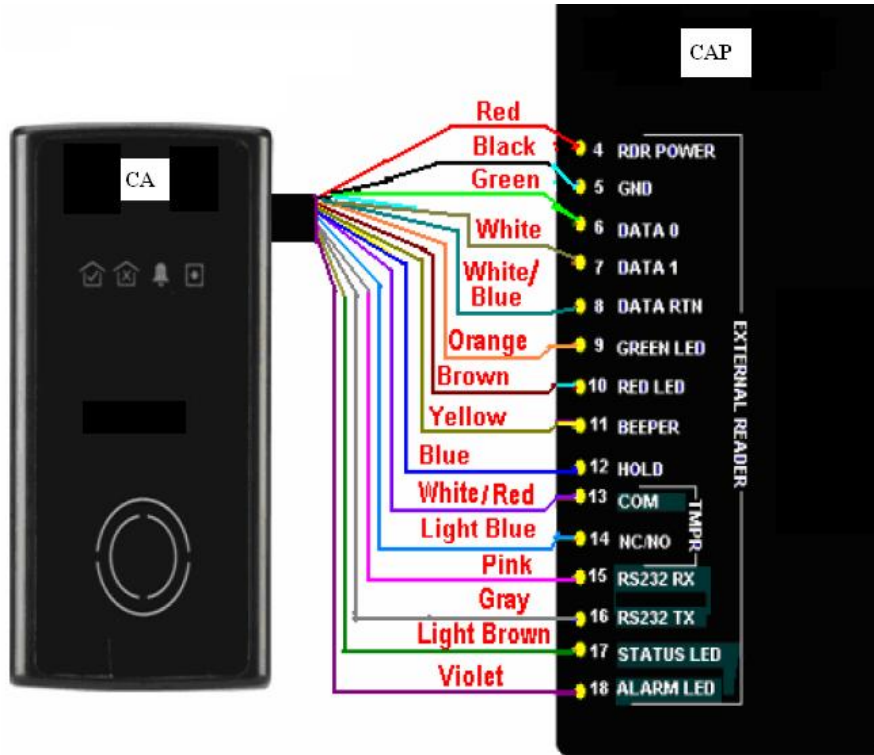
As shown in the above figure, Red wire of the EM Lock is connected to the NC terminal of the Lock Relay and Black wire is connected to the 0v or –ve terminal of the power out.

In case of Premium door Red wire of EM Lock is connected to pin 22 and Black wire to pin 25/26 and, short pin 21 (COM) and 24(+) in the door.

In case of Standard door Red wire of EM Lock is connected to pin 23 and Black wire to pin 21 and, short pin 24 (COM) and 22(+) in the door.

Now we will see how to connect External Reader to the Main Controller one by one.

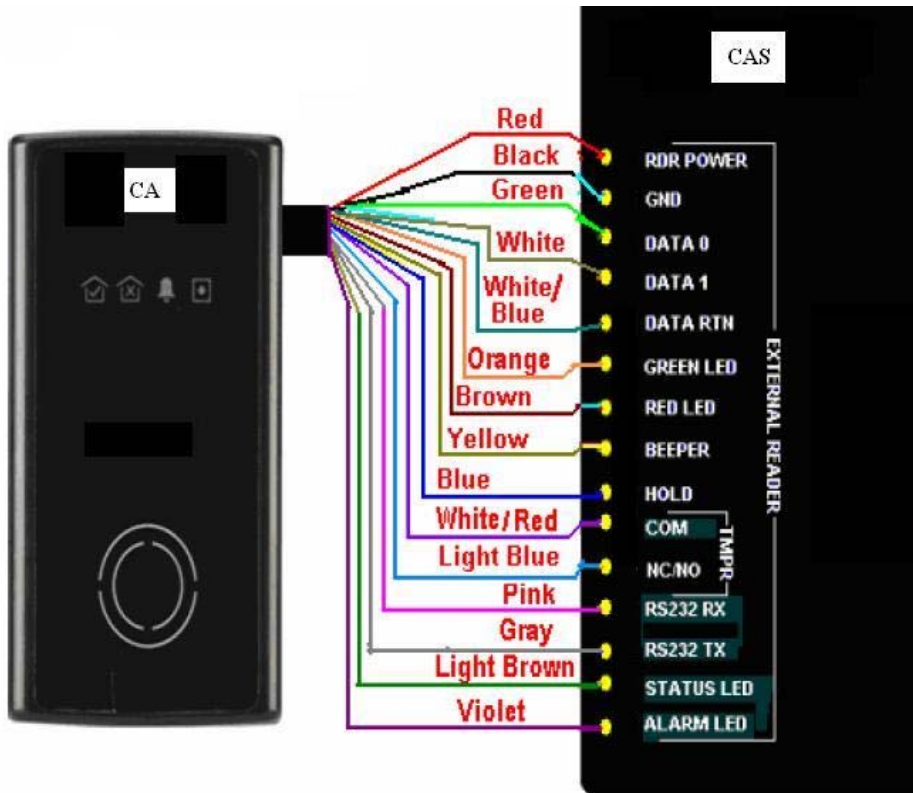
CAP-CA Connection



As shown in the above diagram 15 conductor cable should be connected to the CAP with proper color label. Make sure that the cable must be inserted to the respective pins on the door properly. This connection diagram applies to FOP-CA too.

Now we will see how to connect external reader (CA) to standard model.

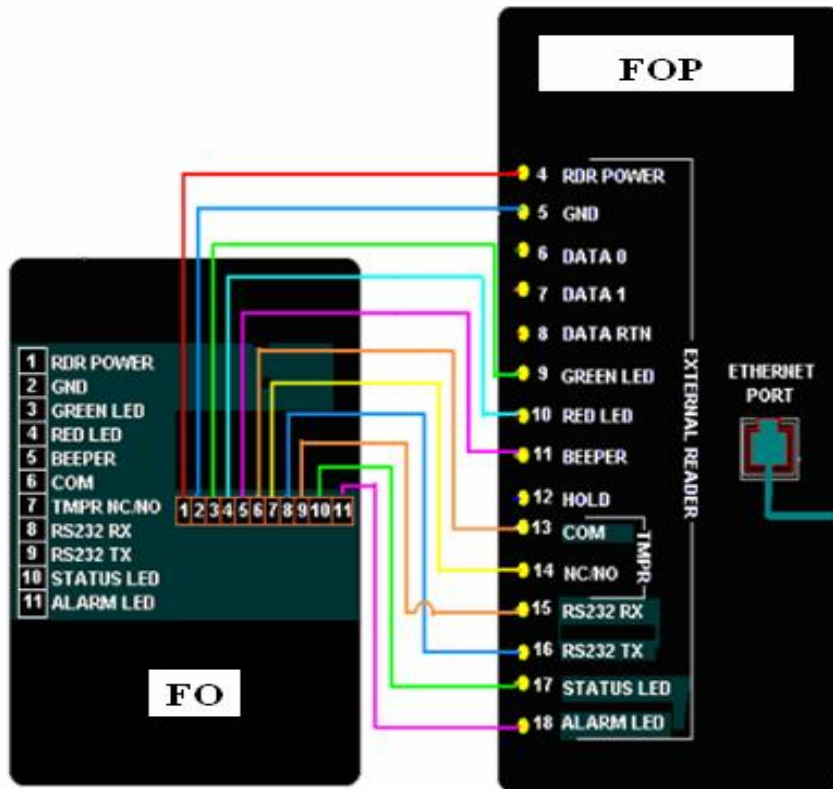
CAS-CA Connection



As shown in the above diagram 15 conductor cable should be connected to the CAS with proper color label. Make sure that the cable must be inserted to the respective pins properly. This connection diagram applies to FOS-CA too.

Now we will see how to connect external reader (FO) to standard and premium model. The connection diagram is same for both standard and premium model.

FOP-FO Connection



FOP -FO Connectivity

Note: See the connection of RS232 RX and RS232 TX, they are connected in the cross manner.

Same is connection is applied to the standard model.

Special Cases

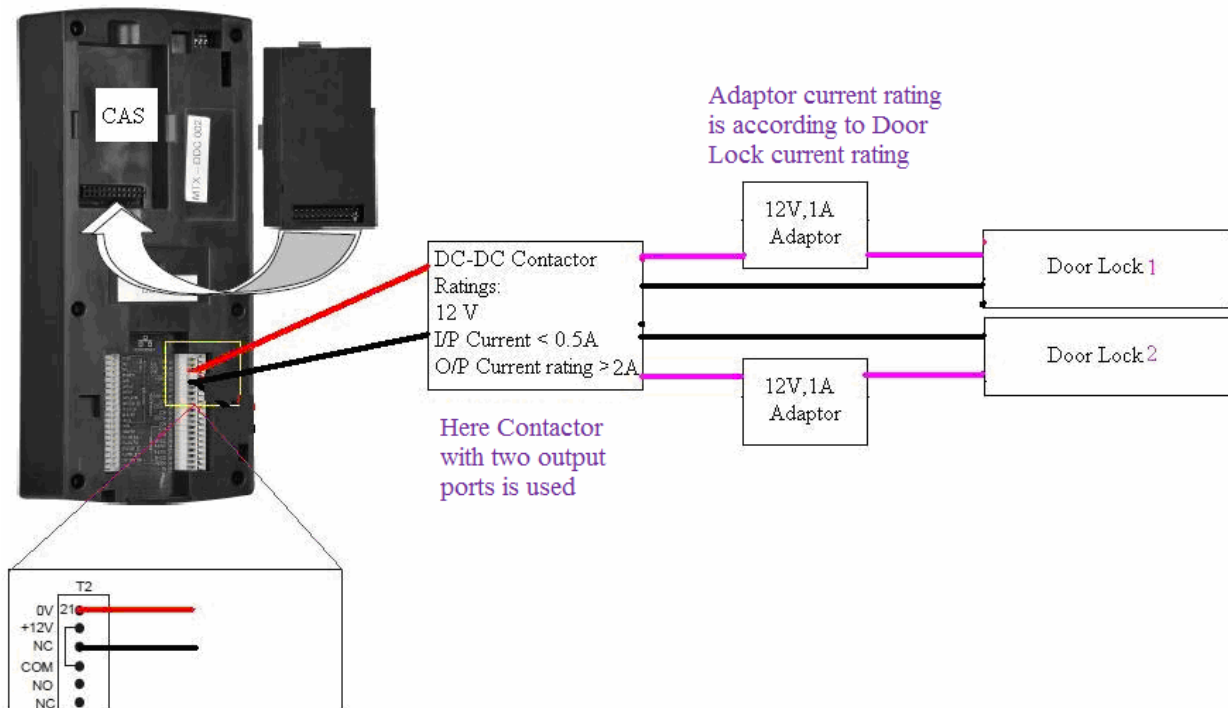
Suppose consider the case in which the customer wants to connect two EM Locks to the single door controller.

For this we will need to use contactor of 12V (<0.5 A) as shown below.

As shown in the diagram +ve wire of the adapter is connected directly to the EM Lock and -ve to the contactor. Black wire of the EM Lock is connected to the contactor directly.

So when a user punch on the door, the door lock relay triggers and contactor gets the input signal and lock opens.

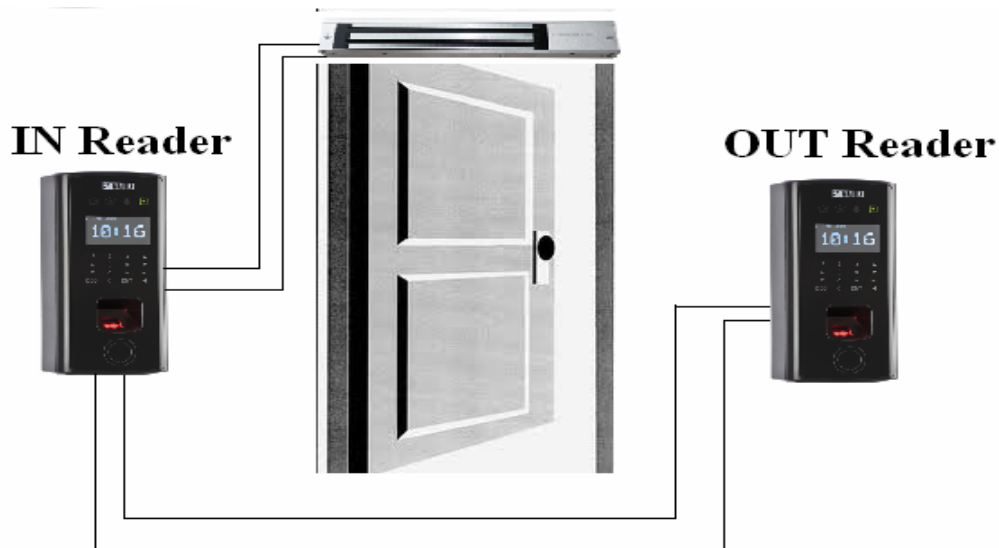
The connection of the contactor input to the door is shown in the figure which is same as the normal lock connection.



Connecting 2 Premium or Standard models on the same Door.

Suppose that a customer wants both card and finger reader for entry and exit. In this case you will need to connect two premium or standard or combination of both.

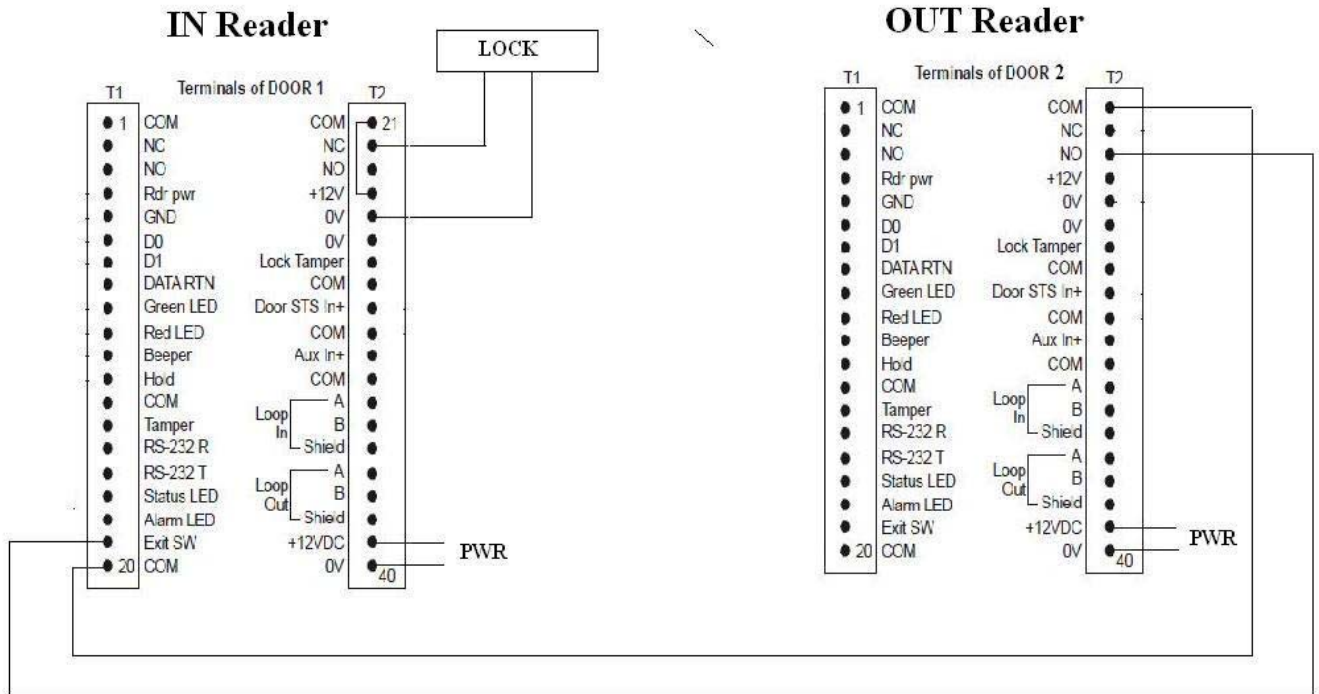
The application diagram is as shown below.



Connecting 2 FOS/FOP/CAP/CAS on one single door for Access Control or Time Attendance

For this scenario we will have to connect lock relay terminals (NO and COM) of OUT reader to the Exit switch terminal of IN reader as shown below. The EM lock is connected to the IN reader.

So when any user shows his credential to the OUT reader , its lock relay gets triggered and as this is connected to the exit switch terminals of the IN reader, lock relay of the IN reader gets triggered and the lock will get opened.



Connection Diagram

Thanks & Regards,

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