

Installation Note

4320 Dual Cotag Reader module

IN021

Installing a 4320 module in a 4010 Controller

Note: this Installation Note describes how to install the module in a 4101 Controller. If you are installing the module in a **4010 Controller**, you need an **814 Expansion Module Cable**. **Installation Note IN048** supplied with the 814 Expansion Module Cable describes how to install the module in the 4010 Controller. You then need to refer to this Installation Note to find out how to connect the module and how to set it up.

Installing a 4320 module in a 4101 Controller

The Dual Reader module plugs into one of the top four slots in the controller motherboard.

1. Disconnect the power to the Controller before installing the module.
2. The chassis in the Controller has six module slots. The Dual Reader module can be plugged into any of the top four, that is, slots 0/1, 2/3, 4/5 or 6/7.
3. Hold the module by the orange connectors, with the component side of the module circuit board facing upwards. Slide the module down and locate its connector with the one on the motherboard.
4. Press the module home by applying downward pressure to the board directly over the connector on the motherboard.
5. Tighten the two fixing screws.

Connections

External connections are made to the Controller via cables which can enter through holes in any part of the case using the knockouts provided. Cables connecting to modules plugged into the motherboard should be routed to each side of the chassis plate where there are cable guides provided. This ensures modules can be removed easily without cables snagging.

Connecting the Dual Reader Module

All connections to the module are made to the strip of orange connectors along the front edge of the module circuit board. There is a duplicate set of connections on each side, one set per reader. The connectors can be unplugged from the module so you can gain access to the screw terminals with a screwdriver. Unplugging the connectors also enables the module to be removed at a later date, leaving the wiring intact.

For door connections use cable which provides enough twisted pairs and singles for a single door - Tx and Rx, lock, LEDs, horn, door monitoring and door exit control.

Connect the overall shield to the nearest ground point and connect the individual shields to the shield connections on the motherboard or module. If you are using separate shielded cables then each cable shield must be connected to the nearest ground point to the cable entry point and the inner cores should then run unshielded to the connections on the motherboard or module.

The following table lists the module connections:

Module	Function
<u>Tx</u>	transmit line
Tx	transmit line
Scr	*if using shielded cable, connect Tx cable shield at module
<u>Rx</u>	receive line
Rx	receive line
Scr	*if using shielded cable, connect Rx cable shield at module
<u>R</u>	red LED (-)
<u>A</u>	amber LED (-)
<u>G</u>	green LED (-)
VA	V _A LEDs common (+) or local warning bleeper on 280 Mk2
□	local warning bleeper (280 Mk2 only)

Information concerning the connection of the various reading heads can be found in the 4101 Controller Installation Manual HB02/57.

Local Warning Bleeper

The system can be configured to give a local warning output when a door is forced or is left open for longer than a specified time (these outputs are instead of the amber LED drives). Each local warning output should be fed to a bleeper mounted near the door, or to the horn which is fitted on the 280 Mk2 Reading Head. For low current devices up to 10mA, such as the horn in the 280 Reading Head, you can draw the power from VA. Alternatively, you can connect the sounding device between the auxiliary 12V supply and the local warning output which is an open collector which can sink up to 250mA at 12V DC. For more power, use the local warning output to control a relay switching a separate power source at the door.

Module	Function
<u>A</u>	local warning output - 0V when active.
VA	+12V

Note: JU1 or JU2 (depending on the zone) must be set to its right hand position to make the amber LED output work as the local warning output.

Relays (for door lock mechanisms)

The relays each have three terminals: Com (common), NO (normally open) and NC (normally closed). The relays are electrically isolated from each other and from everything else. Each relay can be connected to a power supply of maximum 30V AC or DC passing a maximum current of 2A.

Module	Function
NC	Normally closed contact
Com	Common
NO	Normally open contact

Door open and door exit control (egress) inputs

The door open input should be wired to a switch whose contacts are shorted when the door is closed.

The door exit control input should be wired to a normally open pushbutton switch mounted next to the door on the secure side. When the input is shorted, the relay is activated for the relay time.

Module	Function
DO	Door open input - normally shorted to 0V - open circuit to activate
OV	0V
EG	Door exit control input (egress) - short to 0V to activate

Connecting the cable shields

All cables entering/leaving the Controller must be shielded. Each shield must be connected to the nearest ground point to where the cable enters the Controller.

Setting up the Dual Reader module

- To set the amber LED output to be the local warning output, move JU1 or JU2 to its right hand position. JU1 controls the right zone, JU2 the left.
- When using an old 280 Reading Head (part number P02-155, model number MDO280), put JU3 and JU4 in position A. When using a 280 Mk2 Reading Head (part number P02-155-2, model number MDO280-2) or 090 Reading Head, put JU3 and JU4 in position B to increase the range. When using loop aerials, try JU3 and JU4 in both positions and use whichever gives the better performance.

FCC Statement

NOTE: This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect equipment into an outlet on a circuit different from that to which the receiver is connected.