



An Experiment with Hinges and Door Contacts

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When dealing with Orange County card access systems, applying card access to a single wood door with mortise or cylinder, the idea of finding a way to read door status at the transfer hinge is attractive because (1) the labor of running wire to the overhead for a flush-mounted magnetic switch is avoided; and (2) if an authorized-exit lock body is used then all wire that goes to the door frame would go to the same place, the transfer hinge.

At an additional cost of \$25 I found I could procure a magnetic switch that installs into fastener holes in the transfer hinge and is designed to look like the head of a standard #3 Phillips fastener when installed. A pilot hole is drilled in the door, and the fastener is tapped into the hole. On the jamb side, the corresponding fastener hole is drilled through the jamb and a magnetic switch part is installed, with its wires leading to the area in the wall where transfer hinge terminations are made up.

On paper, this looked attractive: for retro-fitted doors, about 10% of door-switch installations in the jamb have more labor than you would think due to hidden features of the wall's framing, and picking up a magnetic switch at the transfer hinge means that the wire run is virtually free because wire is inevitably pulled there for the mortise lock control.

When this idea was moved from the theoretical to the real world, my results were negative. The switch product turned out to be quite delicate. When installers tapped the switch and its magnet into the pilot holes, a certain percentage were damaged. This only became apparent when the commissioning tests for the door were performed, showing up as extra labor to trouble-shoot and correct the problem. This occurred on maybe 20% of the doors in the pilot project. It is possible that with practice the installation crews could have done better, but given the additional cost of the switch I decided to abandon the effort.

I have also identified a transfer hinge with the doors status capability built in to the hinge. This will cost an additional \$50 and has an adjustment at the hinge for sensitivity. I haven't tried this one yet.

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