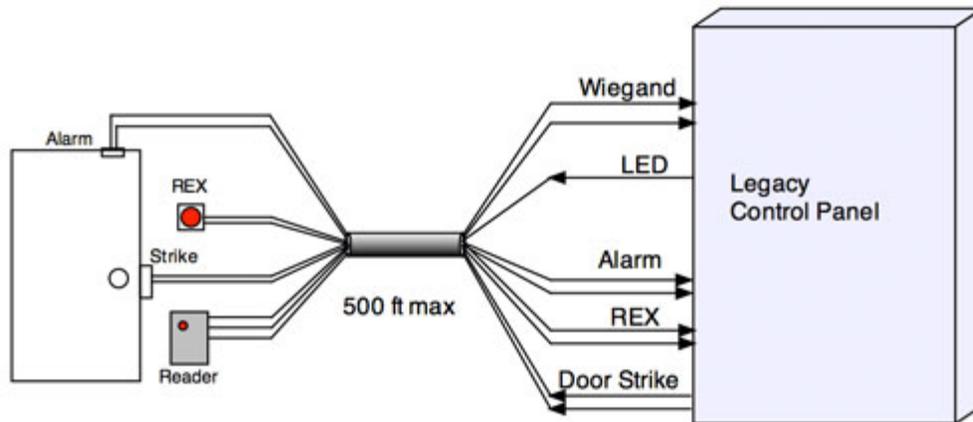


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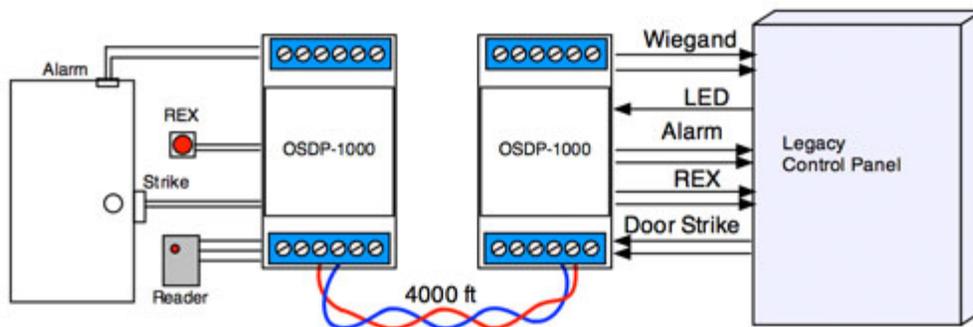
Open Supervised Device Protocol - OSDP

Application Note AN340606-3 Suprex™ Secure

Using OSDP to Supervise Signals, Extend Distance, and Secure Communication in a legacy access control system.

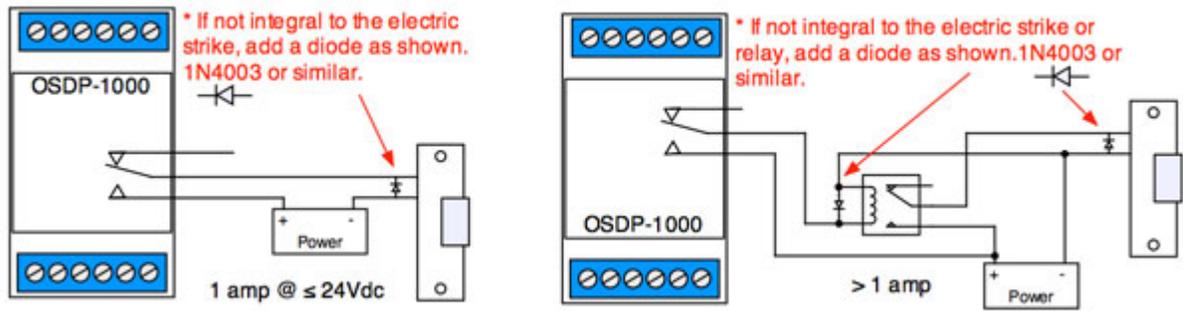


Introducing OSDP to Supervise, Extend, and Secure all signals in a typical Wiegand, Strobed, F/2F, or serial interfaced access control system has many advantages. Not the least of which is to prepare the site for migration to OSDP compliant devices in the future. Sometimes you simply cannot run 12 wires between control panel and controlled access location. This may be due to environmental constraints, distance limitations, or potential damage to aesthetically sensitive structures.

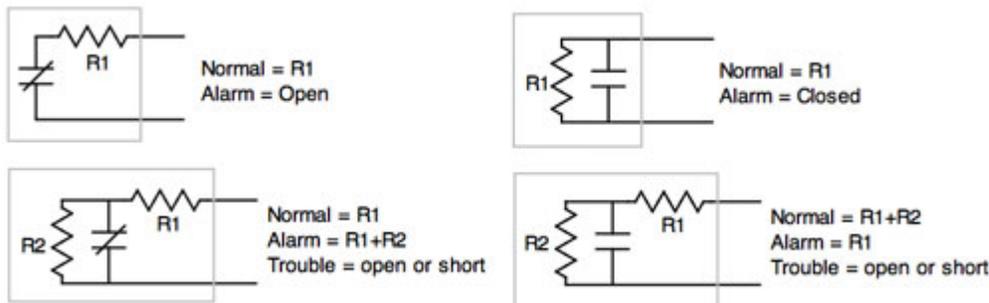


Credential Reader - Any Wiegand (Data 0 / Data 1), Strobed (Clock/Data), F/2F, or Serial interface can be handled by the OSDP-1000 when configured in "Reader Interface Mode". Since the format of the data is reported by the OSDP-1000 to the new control panel as an array of bits or characters, the panel's software must be configured to process the raw bit stream or character string. The reader type is configured by either on-board DIP switch.

Door Strike / Gate Operator - If the required control current is 1amp or less (at 12 to 24Vdc), the OSDP-1000's on-board, form C relay can be used. If higher currents are required, an external relay can be added. The power for the door strike, mag lock, or gate operator can be supplied from the panel (centralized power) or a local power supply near the door or gate (distributed power). See diagrams below.



Sensors, Contacts, Switches, EOL Devices - Since the OSDP-1000 is mounted on the secure side of the door or gate, all remaining field wiring can be terminated at the OSDP-1000. The OSDP-1000 has 2 Supervised alarm inputs to accommodate end-of-line resistor configurations. These can also be used as digital inputs.



Power Considerations - The OSDP-1000 does not magically create power for itself, the reader, or door strike from the twisted pair communication wires (but we might be working on it). The legacy panel or other power supply provided enough power to operate the reader, sensors, and door or gate operator. The OSDP-1000 only requires about 50ma and accepts a wide range of voltage (7 to 24Vdc). The reader, door strike, and any powered end-of-line device typically dictate what voltage to use (12 or 24Vdc).

RS-485 Twisted Pair - After over 30 years of experience with twisted pair communication in the security space, we have found that any 2 conductors will work to some extent. A brand new 18AWG twisted shielded pair will maximize the distance and reliability and is highly recommended. But we have used old coax, 26AWG solid phone wires, THHN, and just about everything else and managed to get at least 500 feet out of it at 9600 bits per second. We understand the everyday installation challenges and have designed the OSDP-1000 to be as tolerant of real-world conditions as possible.

Other Communication Media - RS-485 Twisted Pair is the typical installation method but OSDP is by no means restricted to that. Any suitable half or full duplex medium can be utilized such as multicast or unicast wireless, fiber optics, RS-232 (direct or over modems), WiFi, Ethernet, 2 soup cans and some fishing line (don't laugh, it works!). Cypress has provided many products over the years that utilize these technologies and has overwhelming expertise in this market.

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