

### Maximum Critical Path Lengths for Two-Wire Paths

| Nominal Wire Size | ohms/1000' ohms/Km | Loop (Nominal Wire Size) |       | Star |       |
|-------------------|--------------------|--------------------------|-------|------|-------|
|                   |                    | Km                       | Miles | Km   | Miles |
| 2.5 mm**          | 15.00 ohms/Km      | 12.0                     | 7.5   | 3.0  | 1.8   |
| 14 AWG            | 2.58 ohms/1000*    | 15.2                     | 9.6   | 3.8  | 2.4   |
| 12 AWG            | 1.62 ohms/1000*    | 24.4                     | 15.2  | 6.1  | 3.8   |
| 10 AWG            | 1.02 ohms/1000*    | 39.2                     | 24.4  | 9.8  | 6.1   |

### Characteristic Table for Various Decoder Models

| Decoder Model | Number of Address per Decoder | Maximum Number of Solenoids per Address | Maximum Addresses Operating at Once | Current Draw (mA at Rest per Decoder) |
|---------------|-------------------------------|---|-------------------------------------|---------------------------------------|
| FD-101        | 1                             | 1                                       | 1                                   | 0.5 mA                                |
| FD-102        | 1                             | 2                                       | 1                                   | 0.5 mA                                |
| FD-202        | 2                             | 2                                       | 2                                   | 1.0 mA                                |
| FD-401 *      | 4                             | 1                                       | 4                                   | 1.0 mA                                |
| FD-601 *      | 6                             | 1                                       | 4                                   | 1.0 mA                                |

### Design Criteria

| Condition   | Cirrus™ | Nimbus™ II | Stratus™ II | StratusLT™ |
|---|---------|------------|-------------|------------|
| Maximum resistance in critical path                                       | 33 ohms | 33 ohms    | 33 ohms     | 33 ohms    |
| Maximum number of addresses per wire path **                              | 250     | 250        | 250         | 200        |
| Maximum number of addresses per LDI                                       | 500     | 500        | 500         | 300        |
| Maximum number of addresses per SDI                                       | 200     | 200        | 200         | 200        |
| Maximum number of active solenoids per wire path                          | 20      | 20         | 20          | 15         |
| Recommended interface unit  | LDI     | LDI        | LDI         | SDI        |
| Maximum number of active solenoids per recommended interface <sup>Δ</sup> | 40      | 40         | 40          | 15         |
| Golf Black Solenoid (GBS25)   | 20 mA   | 20 mA      | 20 mA       | 20 mA      |
| Hybrid system max number of interfaces per system (LDI, SDI)              | 12      | 8          | 2           | 1          |

### Maximum Wire Lengths for Secondary Path Wire Runs

| Wire Size | 1.5 mm** | 2.0 mm** | 2.5 mm** | 16.0 AWG | 14.0 AWG | 12.0 AWG |
|-----------|----------|----------|----------|----------|----------|----------|
| Meters    | 100      | 133      | 166      | 88       | 139      | 220      |
| Feet      | 328      | 436      | 545      | 289      | 456      | 720      |

\* Has LSP-1 surge protection built-in. \*\* A wire path is the leg coming off the LDI, SDI or LTB. ΔThe number of decoders on a large system with long wire runs may reduce the number of active decoders that you will be able to operate at one time before the interface maximum current draw is exceeded and the interface shuts down (disconnects from the field wiring).