

INTRODUCTION

The DigiReader DR4200 Series Digital Proximity Readers (***DigiReaders***) are security devices that reads digital credentials at ranges from 1 to 36 inches (2½ to 91 cm) depending upon the model and the environmental conditions. DR4200 Series DigiReaders are bi-directional, so that a credential can be read from either side of the sensor. DR4200 Series DigiReaders are used with the NexSentry 4100 Family, SE818SC and SE422 ACUs operating as stand-alone devices or in conjunction with a NexSentry Manager, an SE6000 (a NexSentry Command Center NSCC) or an SE5850, (WSE access control host systems). Connection between DigiReaders and an ACU is over the WSE proprietary S-Net interface or over a Wiegand interface to a Wiegand ACU. The Wiegand data can be either 26- or 34-bit Wiegand standard.

CAUTION 1. Read this manual carefully before attempting to wire in place a DR4200 Series DigiReader. The warranty is void if damage occurs to the unit as a result of incorrect wiring.

CAUTION 2. The information in this manual is not intended to conflict with the building codes, electrical codes, fire codes, or safety codes required for any given installation. In all cases, the prevailing building codes must take precedence.

GENERAL SPECIFICATIONS

	DR4201		DR4203		DR4205 Series *		DR4226		DR4238	
Description	Lowest cost/ smallest reader for 'light switch' type mountings		Digital proximity reader for door mullions		Different designs and mountings within series *		Digital proximity reader with increased read range		Digital proximity reader with maximum read range	
Dimensions (Inches)	1.8 x 0.7 x 0.2		1.8 x 7.5 x 1.2		*		17.8 x 9.0 x 1.3		25.9 x 13.8 x 1.9	
Dimensions (Cm.)	4.5 x 1.8 x 0.5		4.5 x 19.0 x 3.0		*		45.2 x 22.9 x 3.2		65.8 x 35.0 x 4.8	
Transmit Frequency	140Khz, full duplex operation									
Receiver Frequency	70kHz									
Receiver Demodulation	Phase-Shift Key (PSK) signal									
Card Read Cycle	100 msec									
Power Source	16 - 24 VDC, less than 80mA				*		16 - 24 VDC, 0.6 amp nominal		16 - 24 VDC, 0.7 amp nominal	
Powered via	S-net twisted pair wire									
Power Dissipation	Less than 2 watts						Less than 17 watts			
Controllers	NexSentry 4100 Series, Alto 818SC, SE 422									
Interface to controller	Dual twisted pair (22 AWG, shielded), RS-485;S-Net communications									
Indicators	Single tri-color (green-yellow-red), programmable									
Tamper Protection	Yes									
Humidity	10% to 90% (non-condensing)		10% to 90% condensing		*		10% to 90% condensing			
Temperature (°F)	-31 to 150		-31 to 150		*		-4 to 140			
Temperature (°C)	-35 to 66		-35 to 66		*		-20 to 60			
Environment	Indoor use only		Indoor/Outdoor use		*		Indoor and Outdoor use			
Weight (Lbs.)	0.25		< 1		*		< 5		< 10	
Weight (Kgrams)	0.112		< 0.45		*		< 2.3		< 4.5	
ADA compliant	Yes; Special features for easing disabled access include: hands-free access, audible and visual indicators to indicate access status									
Max. Read Range	DR4201		DR4203		DR4205		DR4226		DR4238	
(Units)	(Inches)	(Cm.)	(Inches)	(Cm.)	(Inches)	(Cm.)	(Inches)	(Cm.)	(Inches)	(Cm.)
QuadraKey	up to 1.5	up to 3.8	up to 3	up to 7.6	up to 4	up to 10	up to 13	up to 33	up to 22	up to 55
NexKey	up to 1.5	up to 3.8	up to 3	up to 7.6	up to 4	up to 10	up to 13	up to 33	up to 22	up to 55
DuraKey	up to 1.5	up to 3.8	up to 4	up to 10	up to 6	up to 15	up to 22	up to 55	up to 36	up to 91
KeyMate	up to 1	up to 2.5	up to 1	up to 2.5	up to 2	up to 5	up to 12	up to 30	up to 15	up to 38
DuraTag	up to 1	up to 2.5	up to 1	up to 2.5	up to 2	up to 5	up to 10	up to 25	up to 15	up to 38
Maximum read range may vary depending on physical environment of installation.										

*See Table 1A for details on DR4205 Readers

Table 1: Digital Reader Specifications

DR 4205 SERIES SPECIFICATIONS

	DR4205	DR4205E	DR4205GM	DR4205K	DR4205W	DR4205WE	DR4205WGM
Description	Digital proximity reader	Digital proximity reader for external use	Digital proximity reader with capability of being glass mounted	Digital proximity reader with integrated waterproof keypad for indoor and outdoor use	Wiegand proximity reader	Wiegand proximity reader for external use	Wiegand proximity reader with capability of being glass mounted
Dimensions	5.3" x 5.74" x 1.27" (13.5 x 14.6 x 3.2 cm)						
Transmit Frequency	140Khz, full duplex operation						
Receiver Frequency	70kHz						
Receiver Demodulation	Phase-Shift Key (PSK) signal						
Card Read Cycle	100 msec						
Power Source	16 - 24 VDC, less than 80mA				8 - 24 VDC, less than 80mA		
Powered via	S-net twisted pair wire						
Power Dissipation	Less than 2 watts						
Controllers	NexSentry 4100 Series, Alto 818SC, SE 422				NexSentry 4100 Series. NexSentry Wiegand Interface Unit Req'd		
Interface to controller	Dual twisted pair (22 AWG, shielded), RS-485;S-Net communications				Dual Twisted pair (22 AWG, shielded), RS-485; S-Net communications; 26- or 34-bit 5-wire Wiegand standard; NexSentry Wiegand Interface Unit required		
Indicators	Single tri-color, programmable						
Tamper Protection	Yes						
Humidity	0% to 90% condensing	5% to 100% condensing	10% to 90% condensing	5% to 100% condensing	10% to 90% condensing	5% to 90% condensing	10% to 90% condensing
Temperature (°F)	19 to 150	-31 to 150	19 to 150	-31 to 150	19 to 150	-31 to 150	19 to 150
Temperature (°C)	-7 to 66	-35 to 66	-7 to 66	-35 to 66	-7 to 66	-35 to 66	-7 to 66
Environment	Indoor use only	Weatherized and splash-proof for outdoor use	Indoor use only	Weatherized and splash-proof for outdoor use	Indoor use only	Weatherized and splash-proof for outdoor use	Indoor use only
Weight (Ounces)	15	24	19	15	12	24	19
Weight (Grams)	420	672	532	420	340	672	532
ADA compliant	Yes; Special features for easing disabled access include: hands-free access, audible and visual indicators to indicate access status						
Maximum Read Range	All DR4205 Models						
(Units)	(Inches)				(Centimeters)		
QuadraKey	up to 4				up to 10		
NexKey	up to 4				up to 10		
DuraKey	up to 6				up to 15		
KeyMate	up to 2				up to 5		
DuraTag	up to 2				up to 5		

Table 1A: DR4205 Series Specifications

BASIC OPERATION

DigiReaders emit a low-level 140-kHz field. When a digital credential card is placed in this field, a digital chip embedded in the key uses the field's energy to become activated. Once activated, the key responds by broadcasting a 70-kHz signal, modulated with a key-specific code sequence, back to the reader. The reader receives this signal and converts it to a digital code which is then sent to the Controller. The Controller identifies the digital credential according to its code and makes either an access granted or an access denied decision.

DR4205K (/W) has a keypad on the face of the DigiReader. The key pad is used to enter the user's Personal Identification Number (PIN). (See the appropriate Controller or security management system manual for details on PIN assignment.)

The user may enter his or her own PIN. The LED turns amber, and then the user presents a digital credential; or the user may first present the key, the LED turns amber, and then the user enters the PIN. The time allotted for this procedure is defined by the PIN GRACE PERIOD which is set with the Controller SYSTEM command. (See the appropriate Controller or security management system manual for information on setting this parameter.) If an error is made in entering the PIN, the user may press the "*" key to clear the keypad and begin entry again.

The keypad versions can be configured for keypad-only use or credential-only use. Refer to your controller manual or security management system manual for details on setup and configuration.

DR4200K is just the keypad part of the DR4205K.

LED OPERATION

LED (S-NET OPERATION)

When the DigiReader is on line, the LED is red during the ready state. The TUNE command is used to specify LED and beeper behavior when a valid key is presented. An equivalent of the tune command may be found in each WSE security management system system.

DigiReaders have a single three-color LED that can be controlled by the Controller. If power is applied to the unit when not connected to a Controller, or improperly configured at the Controller, the LED acts as follows: Flashes red four times in four seconds, changes to steady amber for four seconds and then turns off for 52 seconds. When a key is presented, the sensor beeps four times, and the LED flashes amber until the key is moved out of range. The flashing red, steady amber, off cycle then resumes and repeats indefinitely while power is supplied.

LED (WIEGAND OPERATION)

The LED is controlled to be red or green by the level of the Wiegand LED control input.

120-OHM TERMINATION JUMPER

The internal jumper places 120 ohms of resistance between Data A and Data B for proper end-of-line termination. Install the jumper only if the DR4200 Series DigiReader is the last device on the cable. If you are using:

Reader	Termination Jumper
DR4200K DR4201 DR4205 DR4205E DR4205W DR4205GM DR4205K DR4205FM	W1
DR4203	W3

Table 2: Termination Jumpers

If you are using the DR4208, DR4226 or DR4238, an external 120 ohm, 1/4 watt resistor must be used. There is no internal jumper on these models. The jumper is only available on surface mount technology (SMT) models.

INTERNAL INTERFACE CABLE

An attached cable provides the connection from the printed-circuit assembly and keyboard to the access control unit wiring on all DigiReaders except for the DR4201, DR4208, DR4226 and the DR4238. The cable is color coded as follows:

COLOR	FUNCTION	COMMENTS
Red	+16 to +28 VDC	(Nominal)
Black	DC Return	
Green	S-Net A	For use with WSE access control panels
White	S-Net B	For use with WSE access control panels
Blue	Data 0	For use with Wiegand access control panels
Orange	Data 1	For use with Wiegand access control panels
Yellow	LED 0	For use with Wiegand access control panels
Brown	LED 1	For use with Wiegand access control panels
Shield	Signal Shield	Tie to DC Return when used with Wiegand access control panels

Table 3: Internal Interface Cable

DR4201 READER INTERFACE

The DR4201 reader is connected into the system for S-Net and Wiegand input and output via an RJ45-telephone-jack-style 8-pin connector J1, located in the bottom left corner of the PC board, as shown in figure 1, and described in table 4, below:

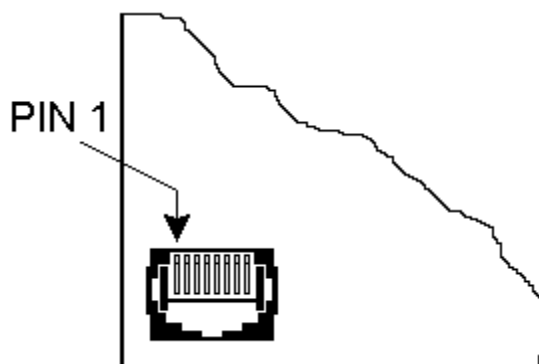


Figure 1: DR4201 RJ45 S-Net/Wiegand 8-pin Connector

J1 Pin	Description
1	+24 VDC
2	S-Net A
3	S-Net B
4	24 V Return
5	Shield or Wiegand Data 0 (Strap W2 select)
6	Wiegand Data 1
7	Wiegand LED 0
8	Wiegand LED 1

Table 4: DR4201 RJ45 S-Net/Wiegand Signal Pin Descriptions

NOTE: A mating connector is supplied with each DR4201 reader, but a crimping tool (not supplied) is required to crimp the connections.

RECOMMENDED S-NET CABLE

The type of cable used for the S-Net will depend on the total length and the number of devices connected. Table 5 lists WSE recommended cables.

	MANUFACTURE	PHYSICAL DESCRIPTION	GAUGE
Data and Power < 4000 Ft.	Southwest Wire & Cable SW 179/ Gray	2 Conductor: Data 2 Conductor: Power	22 AWG 16 AWG
Data and Power < 500 Ft.	Belden 9552 Belden 1069	2 - Pair Shielded	18 AWG 16 AWG
Data Only > 500 Ft.	Belden 9841	1- Pair Shielded	24 AWG
Power Only > 500 Ft.	Belden 9341 Belden 1342 Belden 9343	2 Conductor	18 AWG 16 AWG 14 AWG

Table 5: Recommended S-Net Cable

SWITCHES

There are two switches on most DR4200 Series DigiReader printed circuit board, as follows, (refer to Figure 2):

- Switch SW1 is used to select between the S-Net or Wiegand operating modes.
- Switch SW2 is used to set the S-Net address.

The DR4201 reader has a 5-position DIP-switch S1, which combines the functions of the rotary address switches S1 and S2 used by the other DR4200 Series DigiReaders. This is described in the DR4201 ADDRESS DIP-SWITCH section, below.

DIGIREADER ADDRESS

Each DigiReader must have a unique address. SW1 is used to select the special reader modes of operation, (as shown in Table 6). SW1 should be set to 0 for S-Net operation and F for Wiegand operation. SW2 is set in the factory to 1 but may be set to an address between 1 and 15 (F). Valid addresses may be limited by the controller; (see the appropriate controller manual).

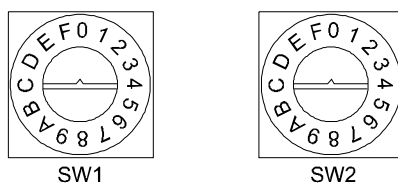


Figure 2: Address Switch

When used with an SE422 controller, addresses 01 and 02 should be assigned to nodes 13/15 and 14/16, respectively.

SW1 * (Normal Mode)	SW1 * (PIN/Key Mode)	SW2	FUNCTION
0	4, 5 or 6	1	S-Net addresses 1-F hexadecimal (1-15 decimal)
0	4, 5 or 6	2	
.	.	.	
.	.	.	
0	4, 5 or 6	E	
0	4, 5 or 6	F	
8 **	C, D or E **	0 **	S-Net address 16 decimal
F		A	Wiegand 26-bit
F		B	Wiegand 34-bit
F		E	Demo Mode
F		F	RF Test Mode ***

Table 6: Valid Switch Settings for Switches 1 and 2

(* See the DR4205K SPECIAL OPERATING FEATURE section, below)

(** See next page for S-Net address 16, Normal or PIN/Key explanation)

(*** See the TESTING THE DIGIREADER LOCATION section, below)

DR4205K SPECIAL OPERATING FEATURE

The DR4205K reader has two modes of operation, dependent on the setting of address switch SW1, (which sets the upper byte of the address): the Normal Mode (SW1 = 0 or 8), and the PIN/Key Mode (SW1 = 4, 5 or 6 or C, D or E). These two modes are described below.

NORMAL MODE

Address switch SW1 set to 0, the DR4205K operates in its normal mode. Address switch SW2 is then set to the physical S-Net address of the DR4205K: 1 through 9 and A through F (addresses 1 through 15). In order to address the 16th reader in the normal mode, SW1 = 8 and SW2 = 0.

Example: SW1 = 0 and SW2 = 1 to F sets normal mode for nodes #1-15;
SW1 = 8 and SW2 = 0 sets normal mode for node #16.

Operation in Normal Mode:

- **DKR portion only enabled:** the key is sent as a key, and no PIN is expected.
- **VIP portion only enabled:** the PIN is sent as a PIN, with the number of PIN digits to be entered set in the SYSTEM command. No key is expected.
- **Both DKR and VIP portions enabled:** the key is sent as a key, the PIN is sent as a PIN. Both key and PIN are expected (in either order). The number of PIN digits to be entered is set in the PIN DIGITS entry of the SYSTEM command.

PIN/KEY MODE

Address switch SW1 set to 4, 5 or 6, the DR4205K operates in its 'PIN/Key' mode, where: either **a)** the PIN will be sent as a key, or **b)** the key will be sent as a PIN. The number of digits in the PIN number is determined by the 4, 5 or 6 of switch SW1, and, again, address switch SW2 determines the physical S-Net address of the DR4205K for nodes 1 to 15. In order to address the 16th reader in the PIN/key mode, SW1 = C, D or E and SW2 = 0. NOTE: C = 8 + 4, D = 8 + 5 and E = 8 + 6.

Example: SW1-SW2 set as 41, 51 or 61, i.e. SW1 = 4, 5 or 6 and SW2 = 1 set node #1 in 'PIN/Key' mode, for a 4-, 5- or 6-digit PIN, respectively; similarly for nodes 2 through 15; but for node 16, for a 4-, 5- or 6-digit PIN, SW1-SW2 = C0, D0 or E0, respectively.

Operation in PIN/Key Mode:

- **SW1 set to 4, 5, or 6 (or C, D or E):** determines the number of PIN digits, 4, 5 or 6, (which must match the number of digits set in the PIN DIGITS entry of the SYSTEM command)..
- **DKR portion only enabled:** the key is sent as a PIN.
- **VIP portion only enabled:** the PIN is sent as a key.
- **Both DKR and VIP portions enabled:** the key is sent as a key, the PIN is sent as a PIN. Both key and PIN are expected (in either order). The number of PIN digits to be entered is set both in SW1 and in the PIN DIGITS entry of the SYSTEM command. (Note that with both the DKR and VIP portions enabled the operation is the same as for the normal mode.)

DR4201 ADDRESS DIP-SWITCH

The DR4201 reader has a single 5-position DIP-switch S1 for address selection, see figure 3, below, which demonstrates S-Net address 1 being selected. Table 7, below, shows the possible addressing selections.

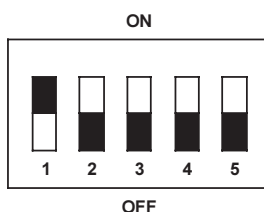


Figure 3: DR4201 Address DIP-Switch Showing S-Net Address 1 Selected

Switch S1 (Settings)					S-Net Address / Function
1	2	3	4	5	
On	Off	Off	Off	Off	1
Off	On	Off	Off	Off	2
On	On	Off	Off	Off	3
Off	Off	On	Off	Off	4
On	Off	On	Off	Off	5
Off	On	On	Off	Off	6
On	On	On	Off	Off	7
Off	Off	Off	On	Off	8
On	Off	Off	On	Off	9
Off	On	Off	On	Off	10
On	On	Off	On	Off	11
Off	Off	On	On	Off	12
On	Off	On	On	Off	13
Off	On	On	On	Off	14
On	On	On	On	Off	15
Off	Off	Off	Off	On	16
Off	On	Off	On	On	Wiegand Interface (26-bit)
Off	Off	On	On	On	Wiegand Interface (34-bit)
Off	On	On	On	On	DEMO Mode
On	On	On	On	On	TEST Mode

Table 7: DR4201 Address DIP-Switch Selections

TAMPER SIGNAL (S-NET ONLY)

DR4200 Series DigiReaders send a tamper signal to an S-Net-based Controller each time an address switch (SW1 or SW2, described above) is changed. Note that the DR4208, DR4226 and DR4238 have physical tamper switches.

S-NET CONNECTIONS

The S-Net is an RS485 serial network for communication between the Controller and node devices. Typically, the cable used is two twisted pairs with an overall shield; one pair is for data, the other pair is for DC power. Terminate the last S-Net device with a 120-ohm, ¼ watt resistor or termination jumper as shown in Figure 2. The maximum S-Net length is 4000 feet (1200 meters).

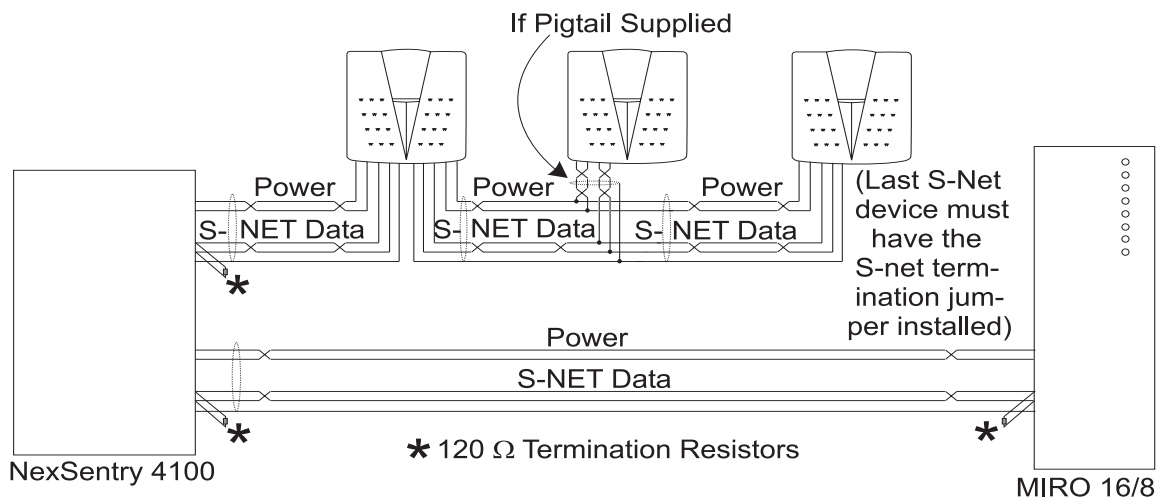


Figure 4: S-Net Wiring

S-Net cable should only be installed in a daisy-chained fashion. WSE strongly recommends replacing all crimp lug/soldered splices by daisy-chained connections in and out of each device. (Note that up to two AD4305 NexStar RS485 Multiplexers may be used to simplify wiring and extend a network.)

Where a pigtail cable is provided with reader, splices are required and the installer should try to keep the splice within 3 feet of the reader, if possible, to allow splice inspection at the reader location.

The type of cable used for the S-Net will depend on the total length and the number of devices connected. Separate twisted-pair cables should be used for data and power when the S-Net exceeds 500 feet (152 meters). See Table 4 for WSE recommended cables.

WIEGAND CONNECTIONS

Refer to the following table for the proper wire size for a particular cable length to use in a DigiReader Wiegand application.

(NOTE: For the DR4201, jumper W2 must be in place for Wiegand to be operative.)

6-CONDUCTOR WIEGAND CABLE WITH SHIELD	
Minimum Wire Size	Maximum Length
22 AWG	200 Feet
20 AWG	300 Feet
18 AWG	500 Feet

Table 8: Recommended Wiegand Cable Gauge

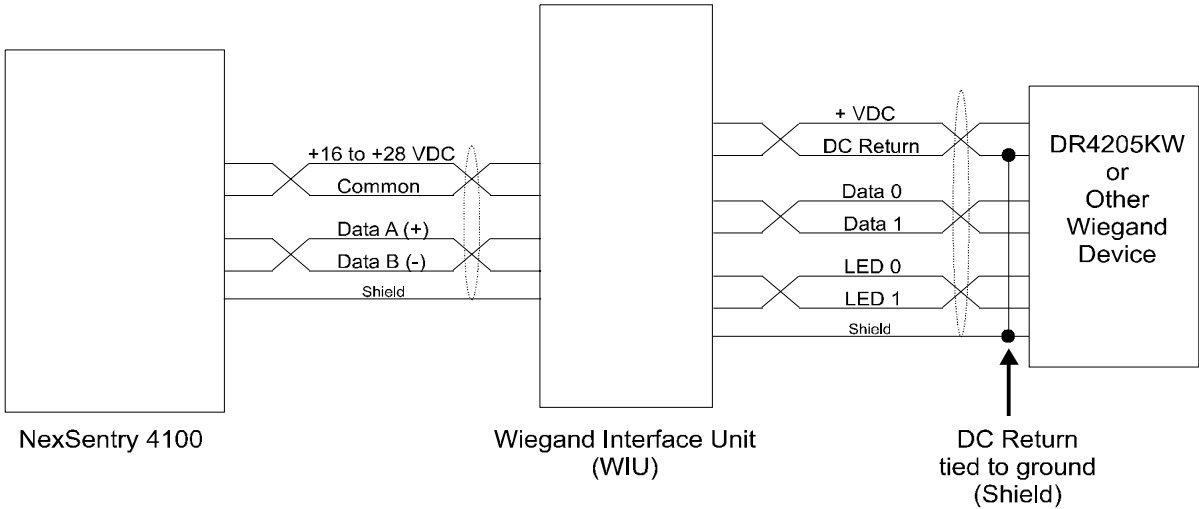


Figure 5: Typical Wiegand Connection

MOUNTING LOCATION (DR4201 READER)

The DR 4201 reader is designed to be mounted in a single-gang switch-plate receptacle, attached to the back of a single-gang switch plate cover, as shown in figures 6 and 7, below.

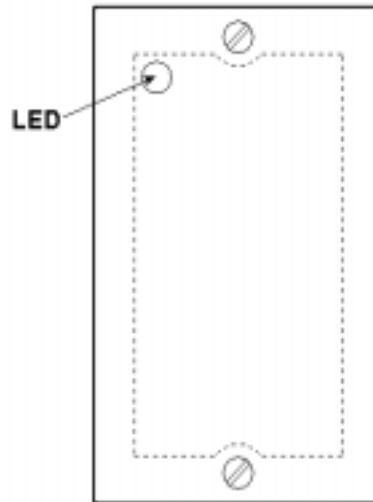


Figure 6: DR4201 Front View (Mounted)

(The DR 4201 reader's LED mode indicator is visible through the plastic cover in the upper left corner.)

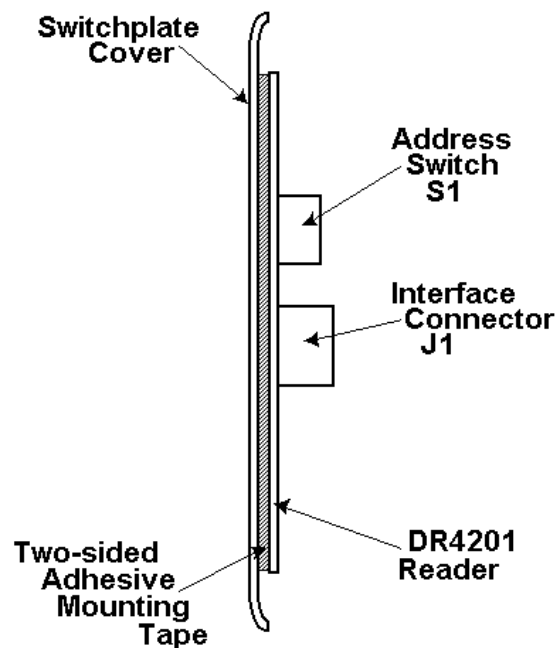


Figure 7: DR4201 Side View (Mounted)

MOUNTING LOCATION (OTHER READERS)

Use care when choosing the installation site. To avoid possible external sources of RF interference, do not locate the unit near motors, pumps, generators, DC-AC converters, AC switching relays, light dimmers, or any other devices that emit an electronic radar frequency. Do not locate the unit within 10 feet (3 m) of a computer terminal.

The DR4203 and DR4204 units are the only two readers that are specifically designed to be mounted on metal. Metal in the vicinity of any of the other devices can reduce the read range. In general, as the amount of metal in close proximity to the device increases, the reliable maximum read range decreases. For optimum operation, ensure that DigiReader has a minimum of 6 inches (15 cm) clearance at the rear and surrounding sides, as shown in Figure 4. Never cover the front of the DigiReader with any type of metal.

Use the method appropriate to the mounting surface material; if required, use sealing compound to maintain water-resistance.

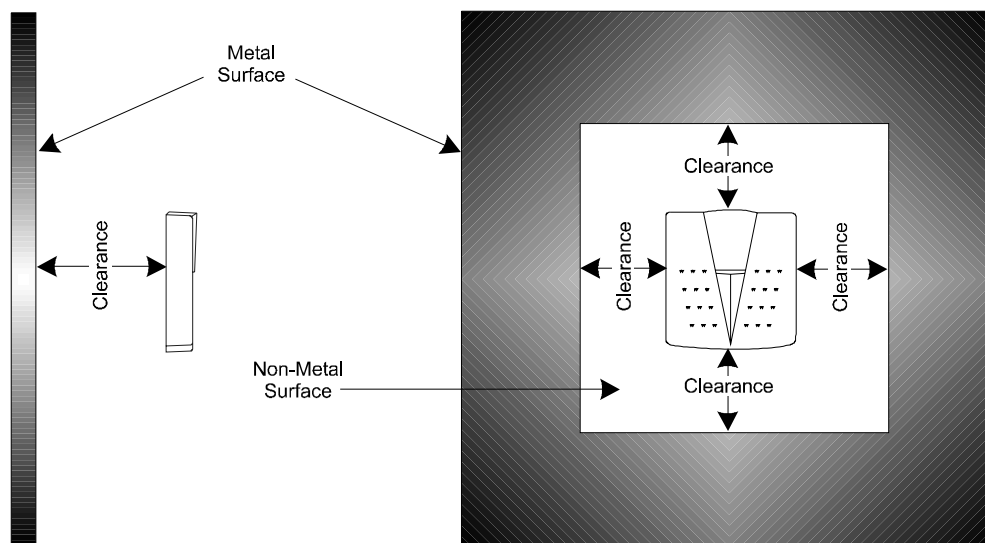


Figure 8: Mounting For Optimum Read Range

TESTING THE DIGIREADER LOCATION

If RF interference is suspected at a particular location, check the site prior to mounting the DigiReader. A DigiReader may respond in one of two ways in the presence of RF interference:

- The unit may beep and the LED illuminate with no access credential present.
- Credential reads may be inaccurate or slow.

Use the following procedure to identify a location and position for DigiReader to minimize interference.

1. Set the DigiReader address switches SW1 and SW2 to **FF** (test mode).
 - Connect only the wires which provide power.
 - Hold the DigiReader against the installation surface.
 - Without presenting a credential to the reader, listen for beeps indicating RF interference. (Make sure you do not have a credential in your pocket or elsewhere, where it might be detected.)
 - The greater the number of beeps, the noisier the reader's environment.
2. Once a quiet (free of RF noise) location has been identified, connect the DATA A and DATA B wires.
 - Set switches SW1 and SW2 to the correct address. The Controller must also be connected to the S-Net and set up to read credentials.
 - Present a valid credential to the unit.
 - Verify that the credential can be read from the expected distance.
3. The DigiReader may again be moved to optimize the read-range.
 - If trouble persists, verify S-Net wiring and grounding.
 - Repeat steps 1 and 2 as necessary to identify the optimum installation location.

GENERAL INSTALLATION

See the procedures for the reader model and installation type below for additional instructions.

Cable Preparation:

1. Route the data and power cable to the DigiReader location and prepare the cable for attachment to the DigiReader.
2. Remove two inches of the plastic jacket and the shielding foil from the cable.
3. Strip each wire back 1/4" for splicing to the DigiReader.

DR4203, DR4205 Series and DR4208 Installation:

1. S-Net cable on DigiReader may be routed from the back, bottom or the side of the DigiReader. The reader is pre-configured for cable installation through the back mounting plate. **Note:** S-Net cable is routed through the side on DR4205GM Reader only. (See Figures 9 and 14, below).
2. For readers other than DR 4205GM or DR 4203, remove the plastic notch from the bottom of the cover. A rattail file may be used to enlarge the opening (Figure 9).

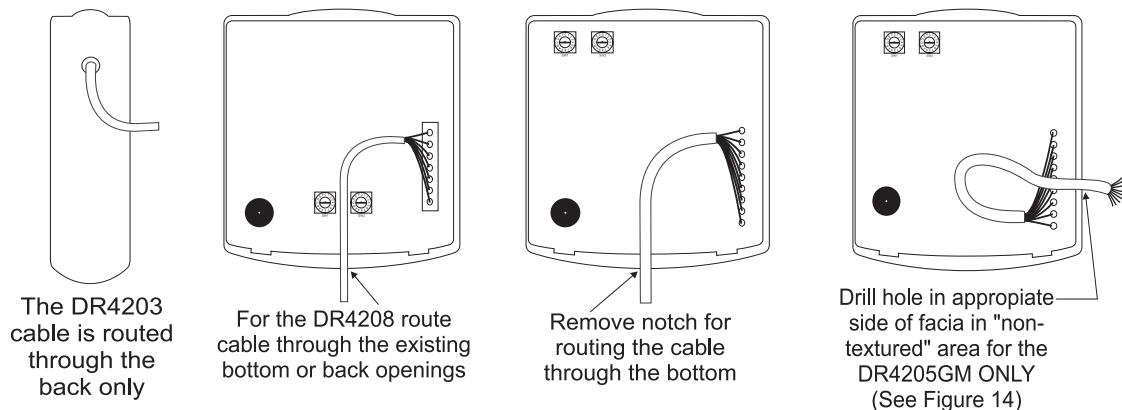


Figure 9: Cable Routing Configurations

- Splice the DigiReader interface cable to the controller wiring run according to Table 3. If the DigiReader is the last S-Net device on the S-Net cable run, install the termination jumper as directed on page 5, **120 OHM TERMINATION JUMPER**.
- Set the address switch, as required.

DR4226 AND DR4238 INSTALLATION

1. Route the data and power cable to the DigiReader location and prepare the cable for attachment to the DigiReader.
2. Remove two inches of the plastic jacket and the shielding foil from the cable.
3. Strip the wire back 1/4" for insertion into a crimp ring. Tin the stripped and ground wire ends.
4. Slip the Teflon tubing over the shield wire.
5. Use crimp tool to attach the crimp rings to each wire.
6. Make the five connections from the cable to the back of a DR4226 or DR 4238 reader using the panhead screws. If the DigiReader is the last device on the S-Net run, install the termination resistor between the Data A and Data B connections.

TERMINAL	COMMENTS
Power +	+16 to +28 VDC
Power -	DC Return
Data A	S-Net A
Data B	S-Net B
RD	Not Used
TD	Not Used
Shield	Signal Shield

Table 9: DR4208 / DR4226 / DR4238 Wire Connections

7. Set the address switch, as required. The address switches on the DR4208 are on the inside of the unit.

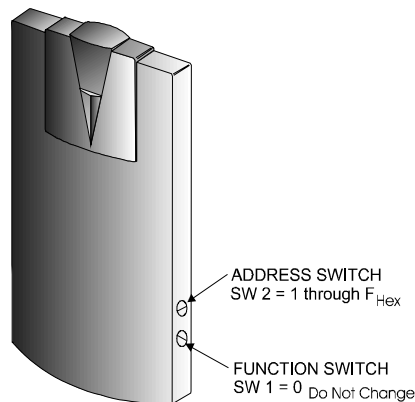


Figure 10: DR4226 / DR4238 Address Switch

WALL MOUNTING WITH SCREWS

- After completing all connections to the DigiReader, weatherize the cable connections by sealing the cable passage with a nonconductive silicone sealant.
- Verify the correct address switch settings for proper operation and configuration.

DR4203 and DR4205 Series

- Mount the reader base to the wall. Use the four WSE-supplied, 1 1/4" Flathead, #6-32 thread screws or other means appropriate to the wall composition.
- Put the DigiReader cover in place and secure with the two self-captive screws from the bottom.

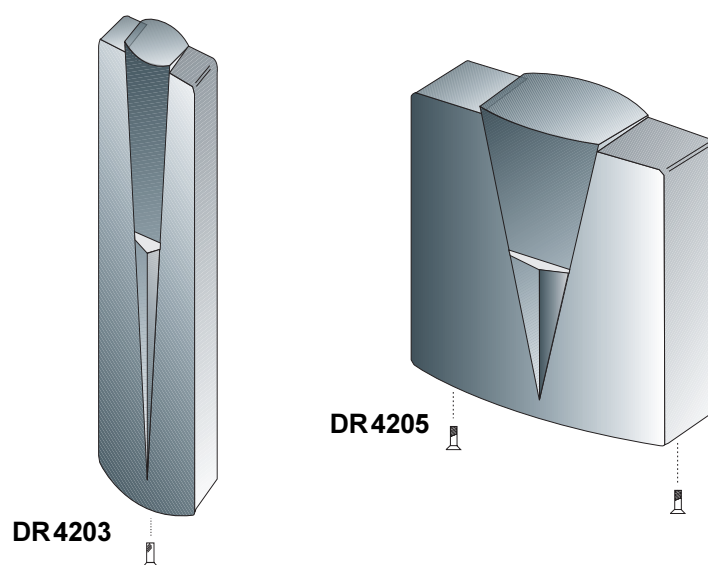


Figure 11: Securing DR4203 and DR4205 Series Cover

DR4226 and DR4238

- Mount the reader to the wall using the four WSE-supplied, 1 1/4" flathead, #6-32 thread screws or other means appropriate to the wall composition.
- Install the four rubber caps to cover the screw heads on the face of the reader.

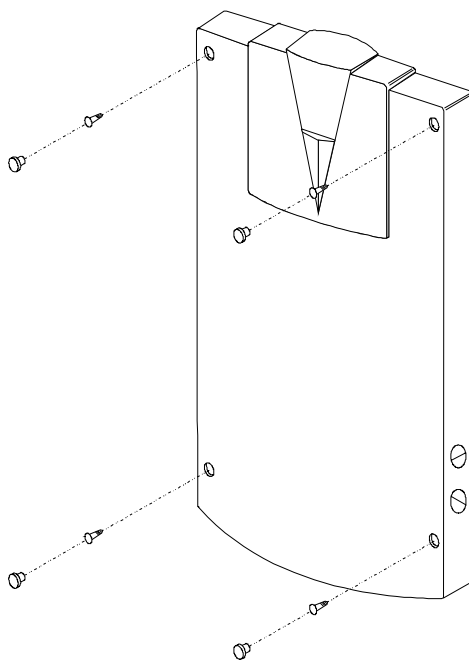


Figure 12: Mounting DR4226 and DR4238

WINDOW MOUNTING DR4205GM

This type of mounting is necessary for DR4205GM unit.

1. Clean the window with glass cleaner or isopropyl alcohol and dry thoroughly.
2. Spray or wipe the window with slightly soapy water.
3. While the window is still wet, peel off the paper backing of the decal and press against the wet section of the window and move around to release any air bubbles to assure maximum contact with the window. Wipe dry any extra water coming out from the sides. See Figure 13.
4. Once the reader and decal are in place, it may be necessary to temporarily tape the reader to the window while the adhesive sets. It should take approximately 10 minutes.

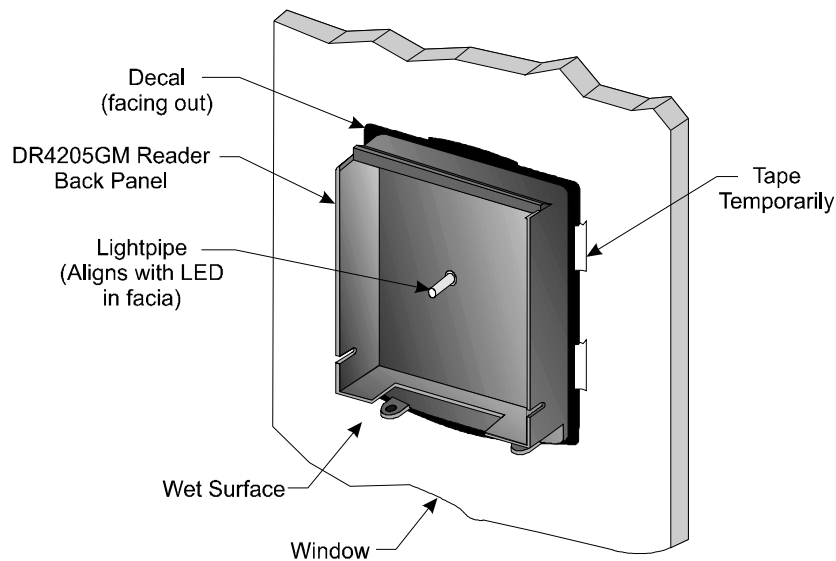


Figure 13: Placement of Decal and Reader onto Glass

5. While the adhesive is setting, follow the general installation instructions on routing the cable through the side channel and addressing the unit. After determining which side the cable will be routed through, drill a hole in that side of the front facia to match the pre-drilled slots in the back panel of the reader.

Note: To find exact hole location for drilling, look for a circle of smooth area on the side of the facia, where there is an absence of texture in the lexan material. Reference page 16 for cabling instructions. Also see Figure 14 below.

6. Secure the cover as shown in Figure 14.

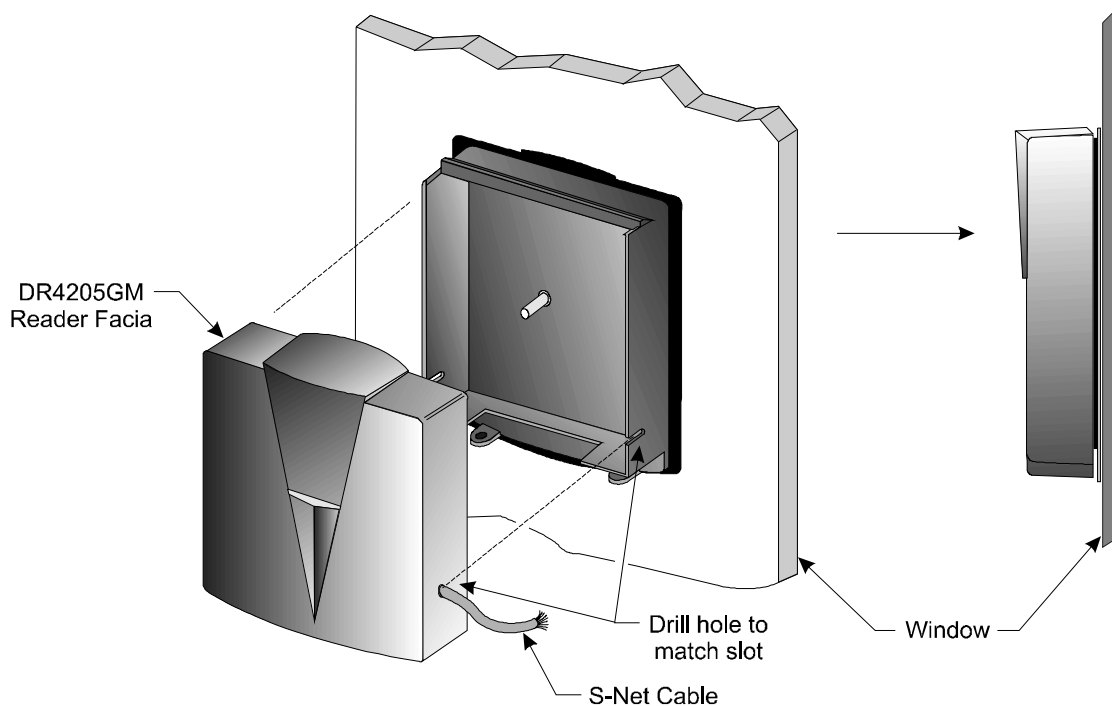


Figure 14: Routing the Cable and Attaching the Facia

7. After the reader is securely set to the window, remove any masking tape used and clean the window surrounding the reader.

CONTACTING WSE

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Web Site: <http://www.wse.com>

DigiReader Series

Name of Manual: DigiReader Series: Installation and Operation Manual
Part Number: P/N 6600025 **Revision:** B

Organization: _____

Address: _____

**Other Equipment Ordered
With Your
DigiReader(s):**

Evaluation of Manual:

	POOR	FAIR	ADEQUATE	GOOD	EXCELLENT	
Organization:	1	2	3	4	5	NA
Content:	1	2	3	4	5	NA
Style:	1	2	3	4	5	NA
Thoroughness:	1	2	3	4	5	NA
Clarity (Words):	1	2	3	4	5	NA
Clarity (Figures):	1	2	3	4	5	NA
Clarity (Tables):	1	2	3	4	5	NA

**Were you able / was your integrator able to set
up your DigiReader(s) by using this manual?** Y N NA

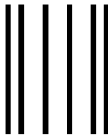
**and/or Did you have to call Customer Service for help on one
or more issues?** Y N NA

What additional aid(s) did you use to bring up your equipment?

**Other Comments
(Positive):**

**Other Comments
(Negative):**

Please tear off this sheet, fill it out, and return it within 3 months of system installation.



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