

IV7

Vehicle-Mount Reader Data Cable Instructions

Use this cable to connect the IV7 Vehicle-Mount Reader to:

- the serial port on a PC.
- general purpose input/output (GPIO) devices such as motion sensors.

These instructions explain how to assemble the data cable and include guidelines for installing the cable on the vehicle.



Note: Before you assemble the data cable, you need to choose a mounting location for the IV7 on the vehicle. For more information, see the [IV7 Vehicle-Mount Reader Instructions](#).

This kit (P/N 203-776-001 or 203-776-002) includes these items:

- Data cable with straight connector (P/N 236-086-001) or right-angle connector (P/N 236-126-001), 3.66 m (12 ft)
- Heatshrink tubing
- Twenty-eight crimp connectors (P/N 809-084-001)
- Four 2K Ω , 1-watt resistors



Note: You may need to provide your own resistors to match your installation requirements. For more information, see “Assembling the Data Cable.”

Required Tools

To assemble the data cable, you need:

- wire cutters and a wire stripper.
- a crimping tool.
- a heat gun.

Assembling the Data Cable

Once you have determined where the IV7 will be mounted on the vehicle, you can begin assembling the data cable.

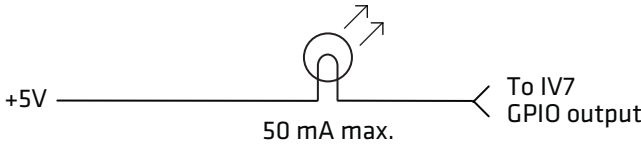
To assemble the data cable

- 1 Strip the sheath from the unterminated end of the cable as needed. If necessary, be sure to leave enough room for strain relief.
- 2 Install connectors on the cable. Use heatshrink tubing to protect the connections. For wiring information, see “[Data Cable Wiring Information.](#)”

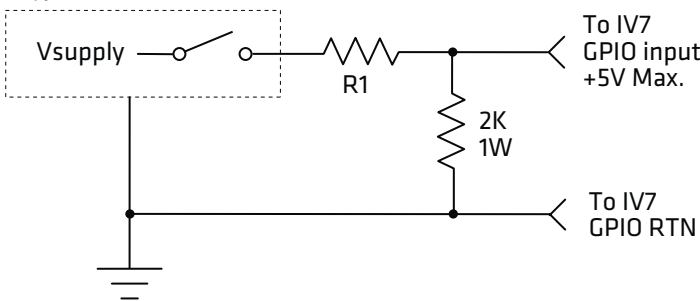


Note: Depending on your installation, you may need to use different terminal lugs (not supplied).

- 3 (Optional) If you are connecting an input device to the IV7 GPIO interfaces, install a 1-watt resistor (R1) in series with the input wiring as shown in the next illustration. The resistor provides protection against over current and over voltage situations.



Typical sensor interface



To calculate the value of R1:

$$R1 \text{ (in } K\Omega) = \frac{(V_{\text{supply}} \times 2) - 10}{5}$$

For 12V input, R1 = 2.8K Ω maximum. For more information on using the IV7 GPIO interfaces, see the IV7 instructions.

Data Cable Wiring Information

Pin	Color	Description
1	Black	TXD from IV7
2	White	RXD to IV7
3	Red	Ground
4	Green	CTS from IV7
5	Orange	RTS to IV7
6	Blue	NC
7	White/Black	GP Input 0
8	Red/Black	GP Input 1
9	Green/Black	GP Input 2
10	Orange/Black	GP Input 3
11	Blue/Black	GPIO Return 1
12	Black/White	GPIO Return 2
13	Red/White	GPIO Return 3
14	Green/White	GPIO Return 4
15	Blue/White	GPIO Return 5
16	Black/Red	NC
17	White/Red	GP Output 0
18	Orange/Red	GP Output 1
19	Blue/Red	GP Output 2
20	Red/Green	GP Output 3

Installing the Data Cable

After you assemble the data cable, install it on the vehicle as described in the IV7 instructions.

For more information on safely installing the cable, see the next section.

Cable Safety Guidelines

In addition to the data cable, the IV7 requires power and antenna cables to connect it to your vehicle-mounted RFID system. As you install the cables, follow these safety guidelines:

- Make sure that the cable routing does not interfere with other equipment or vehicle controls.
- Keep cables as short as practical and route all cables to minimize exposure to damage.
- Make sure the cables will not be pinched or rubbed by moving parts on the vehicle. You may need to sheath the cable to prevent it from being pinched.
- Secure the cables every 15 cm (6 in) throughout the length of the cable run using hardware appropriate for the installation.
- Use a snap-in bushing if the cables pass through a firewall or other sheet metal.



Note: Most vehicle manufacturers offer pulley kits for installation of wiring with risers. Intermec recommends using these manufacturer-specific kits with any installation of the IV7 on a forklift load back rest assembly.



Worldwide Headquarters
6001 36th Avenue West
Everett, Washington 98203
U.S.A.

tel 425.348.2600

fax 425.355.9551

www.intermec.com

© 2010 Intermec Technologies Corporation. All rights reserved.



IV7 Vehicle-Mount Reader Data Cable Instructions



P/N 943-067-003