



Quick Connectivity Guide

This document will assist users of the AR1000 and AR3000 laser distance sensors (RS 232 or RS422 versions) with the proper wiring of the sensor to the Acuity Connectivity Kit (part number AQ700000X). This Connectivity kit is designed as a generic interface box to supply the proper DC voltage and simple serial connections to the Acuity sensor. All current documentation for Acuity products can be downloaded from www.acuitylaser.com. The serial cable with Dsub 9 connector that is supplied with the standard Connectivity Kit is designed for RS232 communications only. A cable for RS422 communications can be provided by Acuity.

Step 1 - Cable Gland

Remove the cover of the Connectivity Kit by loosening the four corner screws. Remove the cable strain relief nut and gland rubber seal from the Connectivity Kit. Slide the metal strain relief nut over the end of the sensor cable, followed by the rubber seal. Note the orientation and sequence of these parts. Bunch together the individual wire leads and pass them through the hole in the Connectivity kit. Slide the rubber seal into the gland and tighten the strain relief nut around the cable jacket. Be sure to pass enough cable through so that the individual wire leads can reach the terminal strip.

Step 2 - Wire Connections

The color labels near the terminal blocks are not correct for the AR1000 or AR3000 wire leads. Follow this step precisely for proper connections. Make the following connections according to the table below. Note that colored wires not listed will have no connection.

AR1000 w/ RS232	AR1000 w/ RS422	AR3000 w/ RS232	AR3000 w/ RS422	Connectivity kit label	Function	Serial Cable Pin #
YELLOW	YELLOW	BROWN	BROWN	YELLOW	RX Data / RX-	3
GREEN	BLACK	WHITE	GRAY	GREEN	TX Data / TX-	2
	VIOLET		PINK	BLUE	RTS / TX+	8
	GREEN		WHITE	VIOLET	CTS / RX+	7
BROWN	BROWN	GREEN	GREEN	WHITE	Enable Trigger	
WHITE	WHITE	RED / BLUE	RED / BLUE	PINK	Limit 1	
		VIOLET	VIOLET	GREY	Limit 2	
ORANGE	ORANGE	BLUE	BLUE	RED	Voltage in	
GRAY	GRAY	BLACK	BLACK	BLACK	Ground	5
SHIELD	SHIELD	SHIELD	SHIELD	SHIELD	Shield	
BLUE	BLUE	GRAY / PINK	GRAY / PINK	BROWN	CL return	
RED	RED	YELLOW	YELLOW	ORANGE	CL	

Step 3 - Establish Serial Communication

Attach the serial cable to the connectivity kit and to a PC serial port. Plug the AC power adapter into an outlet. Follow the Quick Start instructions in the User's Manual for your sensor.

Step 4 - Analog Output (Optional)

The AR1000 and AR3000 sensors output a 4 to 20 mA analog signal to correspond to the endpoints of a set measurement window. Follow the instructions in your User's Manual for setting the zero and span points of the analog limits.

Contact Acuity

Schmitt Industries, Inc.
 2765 NW Nicolai Street, Portland, Oregon, 97210, USA
 Tel: 503-227-5178 Fax: 503-227-5040
www.acuitylaser.com