



B A S Dealer Service Note 2/7/01

Low Readings on 4-20 mA Analog Inputs

Description of Problem

Readings on Analog Inputs configured for 4-20 mA will indicate 10% of the actual input value.

Cause of Problem

A manufacturing error resulted in the installation of the incorrect part on the RSC at the location of the 4-20 mA Analog Input resistor. The design calls for installation of a 220 ohm resistor. The resistor actually installed was 22 ohm.

Extent of Problem

This appears to affect all RSCs manufactured between 8/2/00 and 1/10/01. This problem will only affect readings on Analog Inputs configured for 4-20 mA. All RSCs with a serial number greater than 0020-011001 will have the correct part installed. (Note: The '011001' portion of the serial number indicates a manufacturing date of 1/10/01.)

Identification of RSCs Affected

A couple of methods may be used to determine whether or not the RSC is affected:

1. Check the part number of the affected part, RN9. This part is about 1" long, thin, and red. It is located directly below the 4-20 mA jumpers on the RSC. The correct part is 'L101C221 xxx'. The incorrect part is 'L101S220 xxx'.
2. Check the resistance of RN9. This is done by setting the 4-20 mA jumper of any unused Analog Input. Use a digital multimeter to check resistance between the jumpered AI and GND. The correct resistance is 220 ohm. The incorrect resistance is 22 ohm.

Solution

The following are possible solutions:

1. Ship the affected RSCs to BAS. We will swap RN9 for the correct resistor and return the RSC.
2. Field install an input resistor of the correct value at any 4-20 mA input locations. First, remove any 4-20 mA jumpers that are set. Then install a 220 ohm 1/4 watt resistor between the AI and the GND terminal at each 4-20 mA input. BAS will provide the necessary resistors upon request, free of charge.
3. If none of the Analog Inputs are 4-20 mA, no action is necessary.