

Service Bulletin

Bulletin No: SB-0022-19-304-FS Effective Date: 10-31-2019

Type: Installation

Subject: The effects of line loss on flexSCADA sensors

Scope

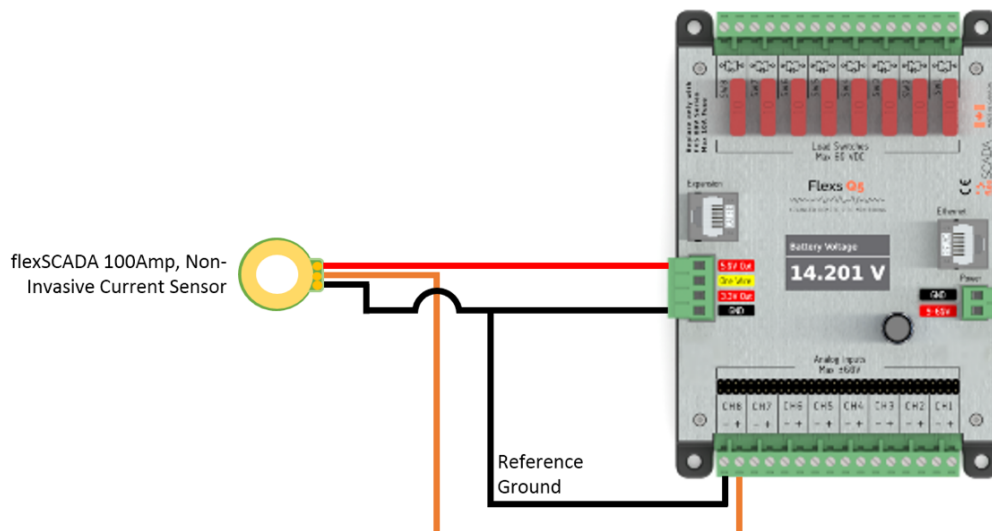
This service bulletin addresses the effects of line loss and EMI on flexSCADA sensors when longer cable runs are used.

Background

In some installations system components may extend over long distances, however long cable runs can be negatively impacted by electromagnetic interference (EMI). Care must be observed when selecting wire for the flexSCADA accessories in relation to distances to ensure the installation provides protection against EMI.

Solutions to address EMI

Long cable runs can collect noise through EMI, possibly resulting in inaccurate sensor output readings. The recommended wire choice is shielded 18-gauge wire for longer runs. For cable-runs five feet or less, connect sensors per the initial installation guidance. For distances greater than five feet, additional steps must be taken to ensure accurate readings from the sensors.



To protect against EMI, a second ground line must be installed between the ground on the sensor and the negative analog input channel (see picture above). This secondary ground reference ensures that the sensor remains accurate over longer cable runs.

The maximum distance recommended for accurate readings from the flexSCADA Q5 line is 250 feet. Beyond this distance the line loss will be too great, even with the reference ground line installed.

For more information please contact Mission Critical Energy at (716) 276-8465 or visit us at www.missioncriticalenergy.com.