



Sensors



Switches



Controls

Application notes



Application Note : September 2021

Market involved : Mobile equipment

Product : ICS E1 inductive sensors

Customer : Manufacturers of garbage trucks

Subject : Protection against load dump

CUSTOMER ISSUE :

Garbage trucks need reliable power and, as with other mobile equipment, the available power source is a conventional vehicle battery.

A loose connection or corrosion can cause a sudden battery disconnection while the AC generator is supplying charging current to the other loads, including sensors.

This common event produces extraordinarily large voltage transients that would destroy exposed onboard electronics if not properly protected, reducing uptime of the vehicle.

OUR SOLUTION :

The ICS E1 sensors have an integrated load dump protection against voltage peaks in the onboard power supply.

The ICS E1 sensors have been tested according to the load dump test specified in ISO 7637-2 / SAE J1113-11, for both 12 V and 24 V batteries.

BENEFITS :

- Protection against load dump, the most challenging of the power supply transients because of the substantial energy in the event
- Increased vehicle up-time