

Industry: Retail Point-Of-Sale | Convenience Store Chain  
Product: Custom Designed & Manufactured RS-232 Optical Isolators

## **+** Major Convenience Store Chain Isolates and Protects Equipment and Fuel Tank Data

### **CHALLENGE**

A major Midwest convenience store retailer was having problems maintaining their serial communications used in the Fuel Management System. Rogue currents (as those caused by lightning storms) continually took down data communications, interrupting tank level data which impacted fuel delivery schedules. Additionally, repair teams had to be dispatched to restore tank level data- adding more cost on top of the revenue loss. Commercial grade surge protectors were tried but, these failed to provide the needed protection. Downtime incidents continued.

### **SOLUTION**

The customer contacted B+B SmartWorx. They had two different types of monitoring systems installed at various locations with special pinouts.

B+B SmartWorx re-engineered standard Model 9POP4 RS-232 2kV isolator and Model 232SPH4 4kV isolator. The two optical isolators were modified with custom pinouts for the two systems and provided isolation against future lightning surges, high voltage shorts, and ground loops.

A field test confirmed that the isolators provided proper isolation levels for the communication line and attached equipment. A major roll out was launched.

### **WHY B+B SMARTWORX**

- B+B SmartWorx is an expert designer and manufacturer of industrial data communication devices including isolation for extreme applications. B+B worked with the customer to identify a solution to fit their application and protect equipment investments.
- B+B SmartWorx customized standard products with the exact pin-outs the customer needed which expedited field installation time and lowered costs. With inhouse manufacturing, B+B provides low volume production runs.



### **VALUE ADDED PRODUCTS** **Engineering Design Modifications**

Clients often have unique cabling infrastructure requirements that don't match standard products available on the market. B+B SmartWorx can easily and quickly change our in-house designed and manufactured products to match the customer's system needs.

#### **Examples**

- Connector changes
- Unique cabling situation
- Preconfigurations
- Pinouts
- Gender changes
- Biasing or termination
- Hardwiring
- Board design
- Specifications (UL, NEMA, C1D2, others)

#### **Customer Benefits**

- Saves assembly time
- Saves cabling costs
- Increased quality
- Simplify installation
- Reduces installation error

# Isolation & Data Protection at Convenience Stores

## PRODUCTS

### Customized RS-232 4-Channel Optical Isolator

(Standard Model 9POP4)

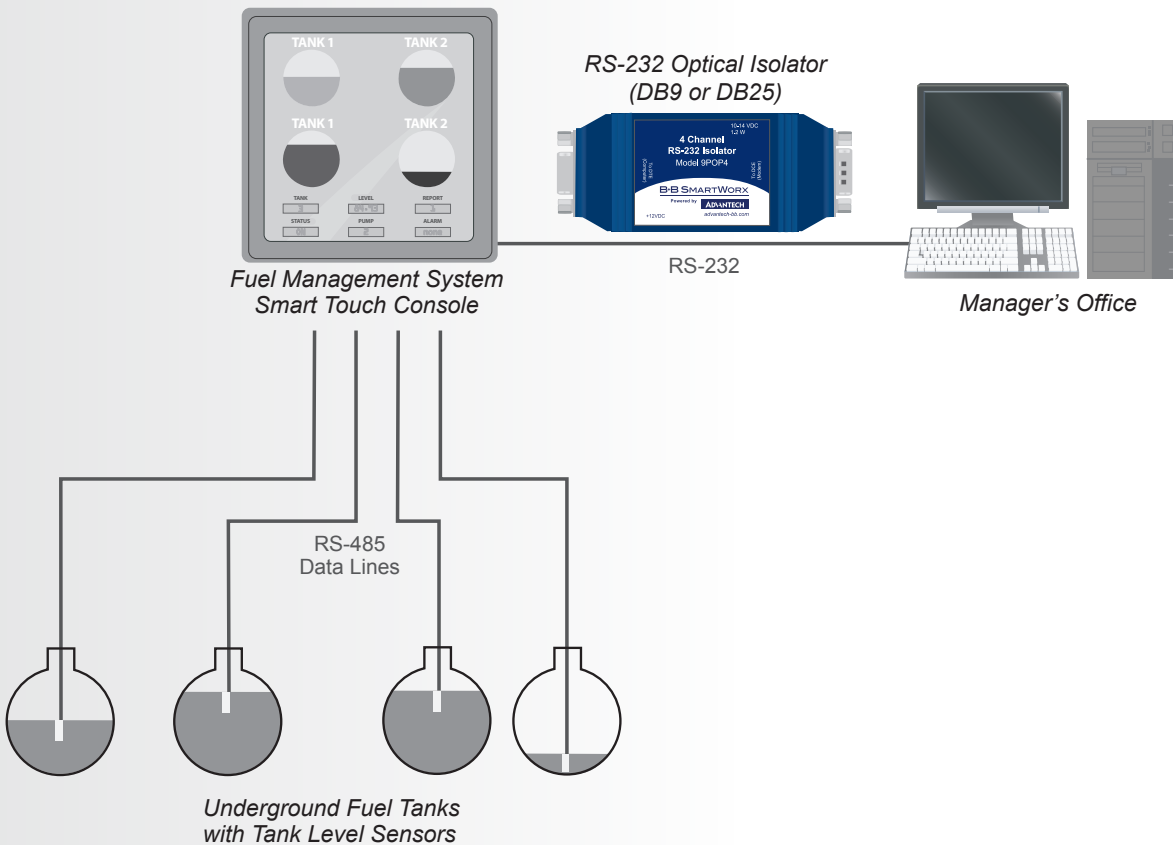
- Isolates and protects RS-232 equipment from lightning surges, accidental high voltage shorts and ground loops.
- 2,500, 2-way Volts RMS isolation protects up to 4 channels
- RS-232 data signals TD, RD, RTS, CTS supported - up to 115.2 kbps
- Easy to customize to meet customer needs



### Customized RS-232 Port-Powered Optical Isolator

(Standard Model 232SPH14)

- Isolates and protects RS-232 equipment from lightning surges, accidental high voltage shorts and ground loops.
- 4,000, 2-way Volts RMS isolation
- Port-powered or optional power supply
- Easy to customize to meet customer needs



**B+B SMARTWORX**

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