



# FUEL SHIELD®

Technical Datasheet

Advanced Fuel Control for Terminals,  
Fleets, and Retail Sites



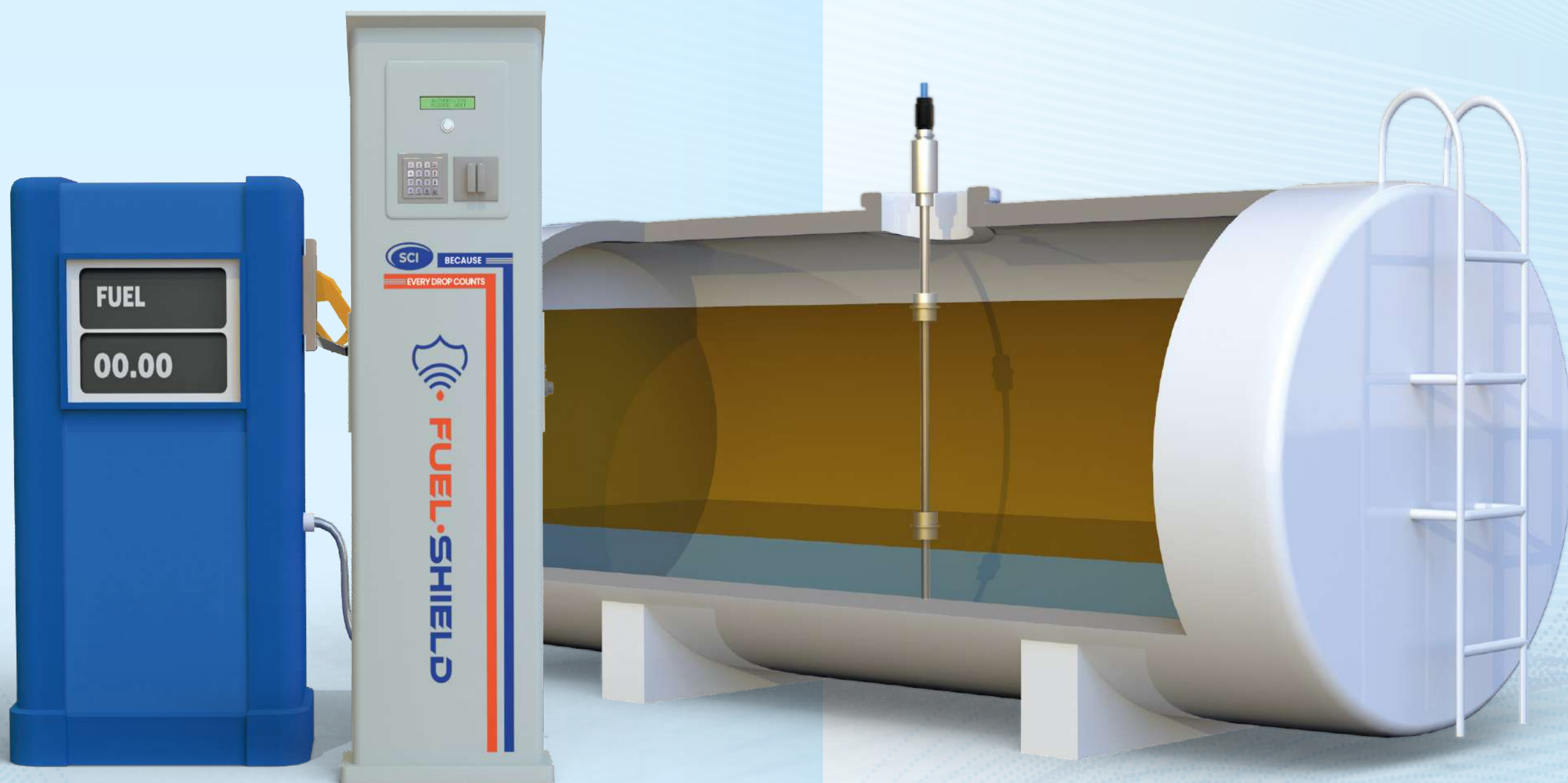
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**FuelShield®** is SCI's advanced fuel management controller built for fuel terminals, and fleets that require secure, scalable, and compliant fuel dispensing control.



It supports **multiple pumps**, up to 8 hoses simultaneously, and integrates seamlessly with **FuelB4®** software for real-time reporting, reconciliation, and analytics.

Designed for harsh environments, **FuelShield®** combines robust **hardware** with flexible **software options**, giving complete control over every fueling transaction.





## System Functions



### Site Control

- Controls all fueling system operations
- Modular components for scalability
- Supports multiple fuel types: Diesel, Unleaded, E85, CNG, LNG, Propane, Hydrogen, Urea
- Preventive maintenance (PM) alerts directly from FMS



### Pump Control

- Controls up to **8 hoses simultaneously**
- Ability to enable/disable pump via host software
- Define timers for transactions & after-pulses per hose
- Auto-disable after 3 failed fueling transactions
- Works with **mechanical or electronic dispensers**



### Security & Authorization

- Vehicle/driver database with editable limitations and lockouts
- Limit fueling by:
  - Vehicle or driver ID
  - Number of fuelings per day
  - Vehicle tank capacity
- Supports multiple authorization methods:
  - Magnetic stripe cards
  - Proximity cards (HID)
  - Keypad PIN entry
  - RF Vehicle Box (wireless vehicle ID)
- Multi-level password system (Standard User / Supervisor / Super User)
- WIN10 Embedded OS fully locked down — minimal ports open
- 3rd-party certification available for security policy review



### Transaction & Printing

- Optional real-time journal printing for hard copy backup
- Optional receipt printer for credit card transactions
- Reports accessible from any Fuel Management Software (FMS) workstation



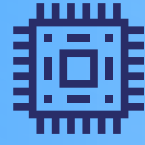
### Inventory & Clearing House

- Compare book inventory with **Veeder Root** system
- Online clearing house compatibility for payment authorization
  - Supports **Visa, MasterCard, AmEx, Diners, Wright Express, Voyager, WEX and EFS**





## Hardware Specifications



### Dimensions

- Mobile Enclosure 15"H x 13" W x 7" D
- Stationary Pedestal Enclosure 64"H x 16.5"W x 10"D



### Power Requirements

- USA: 100–120 VAC
- Europe: 200–240 VAC



### Environmental Conditions

- Operating Range: –40 °F to +130 °F (–4 °C to +54 °C)



### Processor & Memory

- Processor: 1.58 GHz
- OS: Windows 10 (locked down, secure ports)
- RAM: 4GB (battery-backed)
- Storage: 100k+ vehicles, 100k+ Drivers and 1M+ transactions
- Flash: 60GB Industrial Flash Disk
- Clock: Real-time, battery-backed



### Capacity

- Hose Models: 2, 4, 6, and 8 hoses
- Pulser Ratios: 1:1, 10:1, 250:1, 500:1, 1000:1
- Resolution: 0.001 gallon/liter



### Safeguards & Protection

- AC/DC power fail detect
- Transient surge protection on inputs
- UPS-ready mounting bracket (pedestal)



### Diagnostics & Maintenance

- Built-in hardware & software diagnostics
- LED status indicators
- Remote diagnostic software support
- Easy-service design: all electronics in controller head (no special tools required).





## Optional Configurations



- Odometer / Hour Meter Validation
- Tank Monitor Interface – Veeder Root TLS 350/450/4i, RS232/Lan, OPW SiteSentinel
- Supervisor Override Option – authorize vehicles not in DB while recording data
- Vehicle Data Collection – capture meter updates w/o fueling
- Multi-Method Authorization – combine HID + Keypad + RF fueling in one unit
- Truck-Mounted Version – for mobile refueling applications
- Scalability – unlimited sites, employees, vehicles

## Approvals & Compliance

- **FuelShield®** is fully certified for global distribution:
- **UL, ULC, SIRA, CARB, FCC** listed and approved

## Integration with FuelB4®

Every FuelShield® transaction syncs directly to **FuelB4® software**, enabling:

- Real-time reconciliation of fuel dispensed vs. inventory
- Automated BI reporting & dashboards
- Multi-site control for distributors & fleets
- Integration with **third-party tank monitoring systems**

