



Delivering
performance
proven solutions
for buses



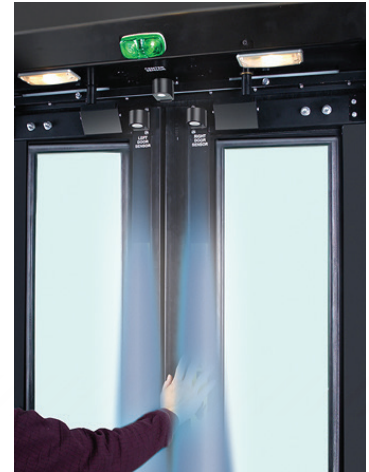
Vapor CLASS[®] Ultra

Contact-Less Acoustic Sensing System



Next generation ultrasonic sensing technology
optimizes exit door operation and increases
passenger protection

- Reduces dwell time – recognizes stream of exiting passengers, holds doors open and eliminates delays
- Reduces maintenance expenses – solid-state CLASS sensors replace mechanical push buttons, tape switches, touch bars and light beams
- Ultrasound sensor system – safe, inaudible and invisible sensors minimize passenger contact with doors
- Reliable performance – solid-state signal processing limits false activations



Uniquely intelligent,
multi-functional and reliable



- + Allows passengers to exit without contact with the doors
- + Adaptive threshold sensing optimizes system sensitivity and reliability
- + Auto-learn target acquisition eliminates manual entry of fixed targets
- + Detachable coaxial door sensor cables for easy install and replacement
- + Robust components resist dirt, humidity, temperature extremes and vandalism
- + Diverse applications for new vehicles and retrofit installations

Ready to Show



Ready to Quote



Ready to Produce



In Production

Vapor CLASS® Ultra Contact-Less Acoustic Sensing System

Programmable to provide different functions during each phase of exit door operation

- **Touch to Open** – functions as touch bar or touch tape for passenger actuation when a door is enabled but is closed
- **Hold Open** – detects exiting passengers and holds doors open, reducing dwell time
- **Contact-Less Sensing** – panel sensors enhance function of sensitive edges, as doors close CLASS enables passengers to exit without contacting doors
- **Proximity Sensing** – while bus in motion, detects passengers standing too close or leaning against exit doors and activates a warning light, an alarm or voice announcement



**Optional
CLASS Voice
Annunciator
provides
digitally
recorded
messages**



Specifications

Design Life:	12 Years
Power Supply:	Operating Voltage: 12VDC or 24VDC nominal Minimum Operating Voltage: 10VDC Maximum Operating Voltage: 37VDC Transient Voltage Spikes (1 msec. max. duration): +/- 250VDC Total System Power Consumption: 30W max
Sensors:	Operating Frequency: 40 kHz to 125 kHz Robust coaxial cable, easy to install or replace Panel sensors equipped with replaceable cables
Computer Interface/Diagnostics:	USB
Vehicle Interface:	J1939
Temperature Range:	-4° F to 140° F (-20° C to +60° C)

**For more information, contact your local
Wabtec Bus Solutions representative.**

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The Next Generation CLASS® ULTRA

SYSTEM COMPARISON	CLASS	CLASS ULTRA
Minimizes Passenger Contact	✓	✓
Door Open Activation Device	✓	✓
Reduces Dwell Time	✓	✓
Improved Sensing Algorithms		✓
Auto Learn for Simple Set Up		✓
Coaxial Sensor Cables		✓
USB for Diagnostics		✓
J1939 Communication		✓

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