Cab Signaling, ITCS & E-ATC Platform

The Ultra Cab platform is the heart of KB Signaling's on board systems for Positive Train Control (PTC), whether it be traditional or enhanced Cab Signals or our communication based train control offer.

KB SIGNALING™

Ultra Cab II

Key Benefits

- Multi territory capable
- Adaptable vehicle voltages
- Programmable Cab Signals
- Adaptable I/O
- Dual ended operation

Cab Signal Discriminators

General Description

The Ultra Cab II is a solid state cab signaling solution that provides real-time onboard reception of wayside signals allowing for safer, more productive hauling of products and people, while meeting the latest PTC requirements.

Designed for reliability and long life, Ultra Cab II provides troubleshooting data and onboard self tests for fast problem diagnosis and a low mean time to repair. The modular design and system architecture will enable expansion to meet all of your future operational needs.

Logic Control Rack

Customer Benefits

Collision Avoidance… Derail Prevention

Customer specific operating rules enforced ensuring vehicle spacing to avoid collisions and proper speed limits around curves to prevent derailments.

Performance Proven

Over 20 years of reliable, fail safe operation on 9000+ vehicles in both freight and transit applications.

Real time On Board Notifications

Operating conditions presented real time to operator for controlling vehicle speed allowing safe operation while meeting operation needs.

AC Locomotive EMI Noise Immunity

Cab signal discriminator receiver coils and dual-digital signal processing provides immunity to AC traction motor EMI noise.

Ultra Cab II

Specification

System Processor

- Surface mount microprocessor technology
- CAN network por
- Auto calibration mode and user interface
- Diagnostic mode and user interface
- Logging capability, expandable via off board memory
- Multiple wheel size setting via user interface
- Date and Time via user interface

Cab Signal Receiver

- Multi territory operation (up to 16 possible)
- Simultaneous dual carrier operation
- Digital Signal Processing technology
- Typical Cab Signal currents: 375mA 20Amps (freight) and 100mA 10Amps (transit)
- Frequency Range: 20 Hz 250 Hz (dual carrier) and 20 Hz 4550 Hz (single carrier)
- Input Dynamic Range: greater than 44db Calibration: automatic via system processor calibration mode, no analog circuits to adjust

Track Receivers

- Body Mount Dual Carrier: 20Hz - 250Hz
- Truck mount Single Carrier: 20Hz - 4550HZ

Smart Aspect Display

- Microprocessor technology accommodates different user interface requirements.

Weight

- Approximately 35 pounds (16kg) (depends on configuration)

General Purpose I/O

- 74, 37, and 24 volt levels available
- Multiple input and output cards supported
- 12 general purpose inputs per input module
- 8 general purpose and 2 relay outputs per output module
- Triple vital out card for magnet valves, vital relays, aspect displays

Communication Processor

- Data Radio interface (RS 422)
- Transponder interface (RS 422)
- ICE/IFC interface (RS 485)
- 20 milliamp current loop
- CAN network port

Braking Assurance

- Solid State decelerometer
- Braking Curves
- Redundant speed calculation

Dimensions

- VME style card cage: 19 in (48.3cm) wide x 16.75 in (41.3cm) high x 10 in (25.4 cm) deep
- Rugged VEAM type circular connectors
- NEMA 4 LCR Enclosure optional: 22 in (55.9cm) wide x 24 in (61cm) high x 14 in (35.6 cm) deep.

Vibration

- Tested to greater than the following specified vibrations in each of three mutually perpendicular axes:
  - 5 Hz to 55 Hz: 0.5 g peak
  - 55 Hz to 300 Hz: 2.5 g peak

Operating Voltage

- 24 VDC nominal
- 37 VDC nominal
- 74 VDC nominal:
  - Transient: 5 KV peak, 10 ohms source,160 micro second duration
  - Reverse input protection to 100 volts, 59-100 volts continuous operation

Decelerometer Specifications

- Accuracy: 0.01 mphps
- Range: ± 10 mphps
- Software calibrated (no manual adjustment)

Operating Temperature

- Minimum: 40oF (40oC)
- Maximum: +160oF (+70oC)

Storage Temperature

- Minimum: 67oF (55oC)
- Maximum: +185oF (+85oC)

Shock

- Tested to withstand shock greater than:
  - Longitudinal: 10g
  - Lateral: 10g
  - Vertical: 10g
  - Timebase: 150ms
  - Number of applications: 15

Contact your KB Signaling Business Development Manager
Call 1-800-825-7090, or Email us at aso.techsupport-kb@alstomgroup.com for more information today

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