



INTEGRAL  
CONTROL SYSTEMS LTD.

# AUXILIARY POWER SUPPLY 74VDC:24VDC @3KW [AUX]

System Datasheet

ICS Model Number AUX-B001

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[www.integralcontrols.com](http://www.integralcontrols.com)  
[info@integralcontrols.com](mailto:info@integralcontrols.com)

## Auxiliary Power Supply 74VDC:24VDC @3kW: AUX-B001

Using the 74Vdc system as the input power source, the AUX-B001 Auxiliary Power Supply is a heavy-duty railway power converter designed to provide 24Vdc power for locomotives that require 24Vdc power support:

### Key Benefits

- Electrically isolated output decouples the 74Vdc system from the 24Vdc voltage system
- Liquid or air-cooled thermal management available; self-cooled air cooling is standard
- Microprocessor controlled voltage management, charging profiles as required
- Parameters adjustable with onboard interface and memory system
- Multistage charging control algorithm available for battery charging and health optimization
- Automatic battery overcharging protection redundantly provided in both software and hardware
- Standalone autonomous operation by default
- Communication ready for integration with other onboard systems

## Auxiliary Power Supply 74VDC:24VDC @3kW: AUX-B001

### Specifications

#### 74Vdc Supply Input

- Continuous working input voltage: 20Vdc – 160Vdc

#### 24Vdc Output

- Continuous operating output current limit: 150Adc
- Peak output current protection limit (software): 175Apk
- Peak output current protection limit (hardware): 200Apk
- Continuous operating output voltage limit (regulated): 28Vdc
- Output overvoltage limit (software): 30Vdc
- Output overvoltage limit (hardware): 35Vdc

#### Control Power Management

- Nominal supply input 72Vdc with ultra-wide transient range 16.8Vdc-160Vdc
- Isolated EN50155 rated internal power supply
- Reverse bias protection/overvoltage protection/undervoltage protection
- 60 watts power consumption at 72Vdc supply

#### Environmental

- Operating ambient temperature: -40°C to 50°C
- Shock and vibration: MIL-STD-810G
- Self-cooled forced air internal fans

#### Mechanical

- Dimensions: 12" (W) x 12" (H) x 10" (D)
- Weight: 75lbs

## Auxiliary Power Supply 74VDC:24VDC @3kW: AUX-B001

### Control Harness

- 2x isolated CAN (default control interface)
- 1x isolated RS232
- 1x isolated USB
- 1x isolated PWM (alternate control interface)
- 1x isolated digital enable input (24Vdc or 62Vdc compatible)
- 5x isolated 4-20mA analog inputs

### Maintenance Indicator Panel

- Enable LED
- Fault LED
- Input voltage status LED
- Output voltage status LED

## Why work with Integral Control Systems?

- We are customer driven; your success is our primary mission.
- Decades of locomotive control experience; we are ready to solve your toughest project challenges.
- We are experts in locomotive propulsion and traction control; from conventional EMD and GE alternator fed units to DC link AC and DC traction solutions.
- We are innovative and experienced in empowering industry leading railway technology development; from multiengine gensets to battery and battery-hydrogen hybrid locomotives.



*Your Partner in Complete Locomotive Control Solutions!*

