

MOHR™ EFP-RD-UPS

Uninterruptible 24 VDC Power Supply (DC-UPS) / Battery Backup

Rugged, seismically-qualified power supply for 4-20 mA loops or external DC loads up to 8 Watts



EFP-RD-UPS Uninterruptible DC Power Supply / Battery Backup.

The **MOHR EFP-RD-UPS** is a rugged 24 VDC Uninterruptible Power Supply (DC-UPS) / Battery Backup device designed to support 4-20 mA loops or other low-power DC loads for extended periods of time following loss of normal AC or DC power.

Features and Benefits

Reliable Power for 4-20 mA Loops

The EFP-RD-UPS provides reliable power for 4-20 mA loops and other low-power DC loads for far longer and more reliably than traditional UPS or battery backup devices. This allows 4-20 mA instrumentation for process control or other mission-critical applications to continue operating during power outages or following natural disasters.

Flexible Power for a Variety of Low-Power DC Loads

The EFP-RD-UPS can also support a variety of low-power external DC loads up to 8W, including alarms, relays, displays, controllers, and sensor instrumentation. High-efficiency power regulation ensures optimum battery life that tracks essentially linearly with load, up to 12 days or more.

EFP-RD-UPS Key Features

- Precision 24 VDC UPS for extended battery backup
- Powers typical 4-20 mA loops for at least 12 days
- Redundant battery packs and charging circuits
- Seismic category 1 qualification (14 g SSE)
- Weatherproof, robust environmental qualifications
- Integrated intelligent battery management
- Ideal for use with mission-critical systems
- Helps support Spent Fuel Pool Instrumentation (SFPI)

Rugged Performance for Any Environment

Wall-mount stainless-steel NEMA 4X enclosures are designed to survive almost any environmental conditions. Tested to meet stringent NRC seismic, shock, vibration, temperature, humidity, and EMC requirements for surviving beyond-design-basis nuclear plant events.

Simple Setup and Operation

- Plug-and-play operation
- Automated intelligent charging
- Bumpless/seamless transition to backup power
- Daisy-chain supplies for additional capacity

Multiple Configuration Options

- Universal 85-264 VAC (47-63 Hz) power input
- Secondary 9-36 VDC power input
- Optional external alarm relays
- Optional RS-232 serial interface

Specifications

Power System

AC Power Input: 85-264 VAC, 47-63 Hz (120 VAC 50-60Hz nominal)
DC Power Input: 9-36 VDC, ~1.5A @ 24 VDC max.
DC Power Output: 24 VDC, 333 mA (8W) max.
38 Ah Hybrid NiMH battery backup*
* Seamless transfer to backup power upon loss of external power.

Estimated Battery Life by External Load**

1W (42 mA): 10.7 days (257 hours)
3W (125 mA): 4.6 days (110 hours)
5W (208 mA): 3.0 days (72 hours)
7W (292 mA): 2.2 days (53 hours)

** Estimated battery life derated for worst-case temperature extremes.

Connectivity Options

Optional RS-232 Serial
Optional alarm relays:
2x SPDT 30 VDC/120 VAC relays

Environmental and Mechanical

Operating / Non-Operating Temp.: -10°C to +55°C / -20°C to +85°C
Mechanical:

EFP-RD-UPS Controller:
30.5 (H) x 25.4 (W) x 21.0 (L) cm (12.0 x 10.0 x 8.3 in.)
12.7 kg (27.9 lbs.)

EFP-BAT-44000 External Battery Enclosure:
36.5 (H) x 30.5 (W) x 16.30 (L) cm (14.0 x 12.0 x 6.3 in.)
18.9 kg (41.6 lbs.)

NEMA 4X 304 SS enclosure with ANSI 61 gray powder coat (optional)
Panel/wall or Unistrut P1000 mounting

Regulatory

Tested to meet the following standards:
IEEE 344:2004 Seismic (14.0 g SSE, 9.8 g OBE)
IEC 60068-2-27 Shock
IEC 60068-2-8 Vibration
EPRI TR-102323-R3 EMC (Non-Safety)

Designed to meet the following standards:
MIL-STD-108 Environmental, MIL-S-901D Shock,
MIL-STD-167-1 Vibration, MIL-STD-461F EMC,
MIL-STD-810G 509 Salt Fog, MIL-STD-810G 511.5 Expl. Atm.



Complies with all applicable EU directives, as specified by the Declaration of Conformity supplied with the instrument.

Complies with Canadian ICES-003.

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