DU-X Electronic Fuse Distribution

Shown fitted into an RM3 magazine

The **Eaton® DU-X Electronic Distribution** (e-Fuse) is the ideal solution for next generation 5G wireless networks, fibre-based deployments and other low power telecommunications applications requiring compact, efficient and flexible DC power supplies.

Each load and battery system connection is controlled and protected using a semi-conductor device allowing for precise control of overcurrent trip, fault currents and connection. All terminations are made via the front of the unit to ensure ease of use in space constrained installations.

The DU-X distribution embeds a full featured system controller with a front access 100BaseT Ethernet port. This provides access for easy system setup and outbound network communications. Also available from the front are digital and analogue inputs, and digital outputs.

Once partnered with high efficiency rectifiers and fitted into a small 1U high system shelf, operators have available to them one of the most compact and innovative small systems on the market, providing up to 2000Watt of power.

e-Fuse-based load protection offers benefits such as: rapid late point definition of protection outputs, reduced lead-times, energy metering, and remote reset preventing costly truck rolls.

Typical applications

Include providing secure power for

- Radio Base Stations
- Fibre networks
- Customer premises equipment
- Roadside cabinets
- Converged VoIP/data networks, PoE, and IP routers.

Features

- Super compact design
- Local or remote setting of load and battery protection
- Full current output at chosen setting, no derating
- Full front connection
- Rapid late point definition to reduce lead-times
- Embedded system controller
- On-board secure web server
- SNMP agent
- Energy metering function
- Setup via web, keypad or configuration file
- Compatible with Eaton's Energy Saver (ES) rectifier

ENERGY SAVER
VERIFIED SOLUTION

E·T·N

Powering Business Worldwide

Technical Specifications

Input

DC Input Voltage Range	37 – 59.5V

Output

DC Output Voltage Range	43 – 57.5V	
DC Output Power *	Nominal: 2.0kW	48V DC, 42Amp (APR48-ES)
	LVD†: 1.72kW	41V DC, 42Amp (APR48-ES)

* Assumes two rectifiers fitted with one used for redundancy and battery recharge.
† Low Voltage Disconnect point (example voltage)

System

Load	Load Outputs: 6 e-Fuse rating: 5-25Amp each (1Amp steps) [1] *[1] 300Amp max fault, 10kA thermal inline fuse* *Each pair of output leads must be less than 3m long or 4uH in inductance.* *Maximum non-current limited load capacitance that any output will start into is 10uF with a minimum ESR of 50mR at the end of 0.5m 2.5mm2 leads.*
Battery	Battery Inputs: 2 e-Fuse rating: 10-50Amp each (1Amp steps)[2] *[2] 550Amp max fault, 10kA thermal inline fuse* *Maximum 200AH string per connection* *Battery connection leads shall be less than 3m long or 4uH in inductance*
Battery/Load Disconnect	LVD and PLD

Communication

Physical	100BaseT Ethernet
Communications	TCP/IP, https, SNMP, and on board web server
System Inputs	Temperature (battery)
User Display	128*32 Dot matrix display
Indicators	General: Power on, no alarms. Active alarm Load/Battery: On, Pending, Tripped
Keypad	5-way navigation control

Input / Output

Digital Inputs	5 x TTL level compatible inputs, all common return. 2 x inputs can be configured as 0 to +10V analogue input, or 0 to -60VDC for battery midpoint. 3 x inputs can be configured as digital input /output.
Digital Outputs	5 x relays (2 x isolated commons), all normally open

Datalogging

Event Log	10,000 lines
Data Log	10,000 lines
Energy Log	10,000 lines

Environmental

Operating Temperature Range	Rated:	-10°C to +65°C [14°F to +149°F]
	Extended*:	-25°C to +70°C [-13°F to +158°F]

*Output current from the rectifiers is derated above 50°C

Mechanical

Dimensions H,W,D	42mm [1.65"], 3U: 133mm [5.25"], 266mm [10.45"] overall
Weight	1kg

Software

DU-X-GUI	Configuration file software.

System

Compatible Systems	**RM3-440-0120** - 1x DU-X, space for 2x APR48-ES rectifiers - 335mm deep[3], 19" mounting, 1U high - 2 x AC blunt cords (no plug) - CE and UL compliant **RM3-440-0620** - 1x DU-X, space for 2x APR48-ES rectifiers - 335mm deep[3], 19" mounting, 1U high - 2 x IEC320 AC sockets - CE and UL compliant **RM3-340-0120** - 1x DU-X, space for 2x APR48-ES rectifiers 300mm deep[4], 19" mounting, 1U high - 2 x AC blunt cords (no plug) - CE compliant

[3] Additional rear space is required for exhaust air.
[4] Additional vertical space is required for exhaust air.

Certifications

All products comply with International Standards.

North America	UL Recognised (Canada, USA), FCC
Europe	CE
Australia and New Zealand	C-Tick

In the interests of continual product improvement all specifications are subject to change without notice.

RoHS COMPLIANT

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