

# IEC 61850-3 and IEEE 1613 Redundancy Box

## Lynx-RB-FT3G-MV

- **Ideal for substations and their communication networks**

- HSR/PRP seamless redundancy
- Supporting various substation topologies
- IEEE 1588v2 Precision Time Protocol (PTP)
- 3 x 1G combo fibre or copper ports for flexibility
- 1 x digital alarm output

- **Proven robustness and reliability**

- Redundant wide input power supply
- Withstand voltage interruptions up to 50 ms
- IEC 61850-3 and IEEE 1613 approval
- -40 to +70 °C without ventilation holes



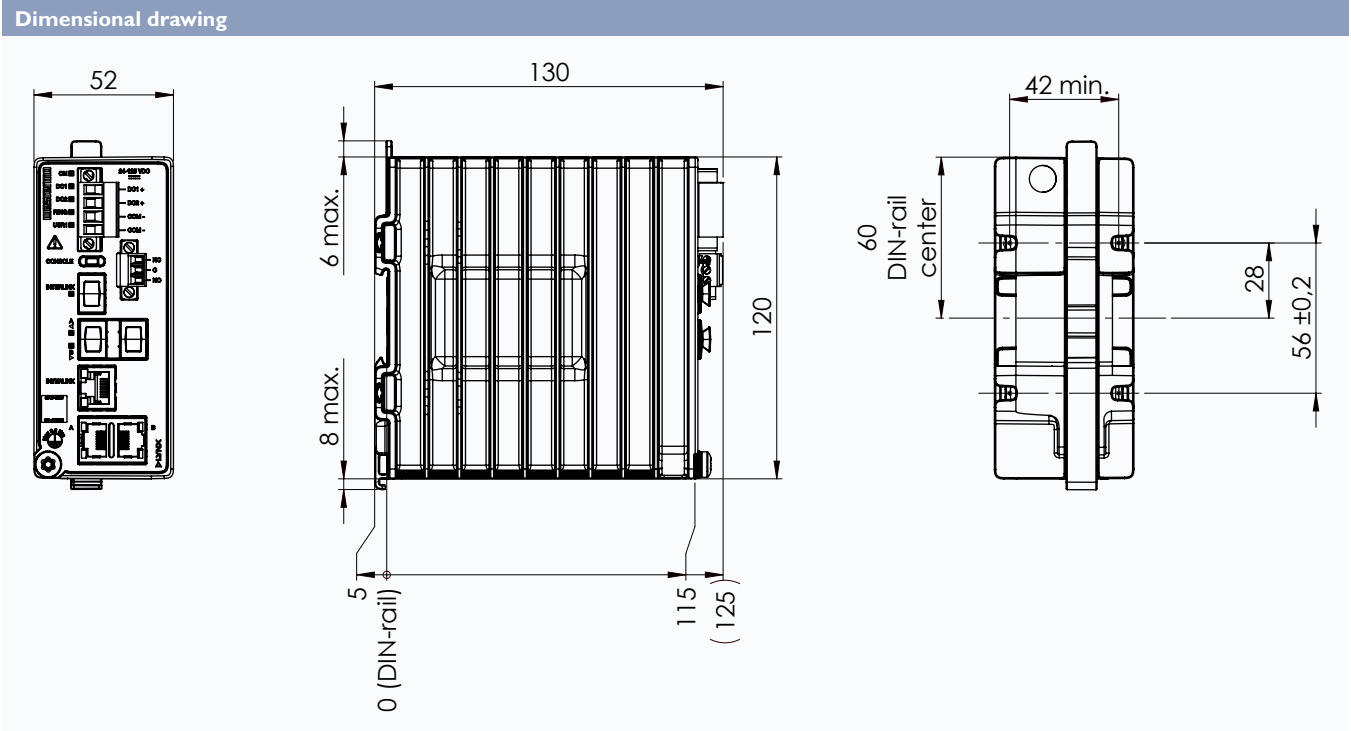
The Lynx-RB-FT3G-MV is a compact redundancy box (RedBox) supporting High Availability Seamless Redundancy (HSR) and Parallel Redundancy Protocol (PRP). Its innovative features and robust construction make it the ideal choice for mission critical networks that demand uninterrupted data communication. This device is designed for highest possible system availability and applications that require zero recovery time such as electrical substations. In addition, as cybersecurity threats grow in sophistication, the Lynx-RB-FT3G-MV offers an extensive suite of tools to safeguard your network.

Designed to withstand the toughest environmental conditions, the Lynx-RB-FT3G-MV is resilient against high EMI levels derived from load switching and lightning strikes. It can also endure extreme ambient temperatures and with the use of exclusively industrial-grade components it is ideal for challenging industrial settings where reliability is paramount. Compliance with industry standards is essential, and the Lynx-RB-FT3G-MV fulfills the requirements of IEC 61850 and IEEE 1613 certified by KEMA.

With its compact and DIN-mounted design, the Lynx-RB-FT3G-MV provides easy installation and saves valuable space in industrial environments. It features three combo ports and a wide input redundant power supply, maximizing flexibility and accommodating diverse network configurations.

The Lynx-RB-FT3G-MV industrial network device with RedBox functionality delivers unparalleled performance, reliability, and security for mission-critical industrial applications. Its advanced features, compliance with industry standards, and robust construction make it the ideal choice for ensuring uninterrupted and secure data communication in demanding industrial environments.

# Specifications - Lynx-RB-FT3G-MV



Housing	
Dimensions (W x H x D) <sup>a</sup> .	52 x 134 x 130 mm (2.05 x 5.28 x 5.19 inches)
Housing	Full metal
Weight	960 g

<sup>a</sup>Including contact and DIN-rail fastener

Power parameters	
Rated voltage	24 -125 VDC
Operating voltage	19.2 to 137.5 VDC
Rated current	0.3 A at 24 VDC 0.075 A at 125 VDC
Power interruptions	50 ms 100 % interruption 100 ms 60 % voltage dip

Environmental	
Operating temperature	-40 to +70 °C (-40 to +158 °F)
Storage and transport temperatures	-40 to +85 °C (-40 to +185 °F)
Ingress protection	IP40
MTBF	1,023,000 hours (Telcordia)

Interface	
Console	1 x USB-C serial interface
Ethernet	3 x 1 Gbit combination copper and SFP ports
Digital output	1 x digital output

Approvals	
<b>EMC</b>	EN 50121-4/IEC 62236-4, Railway signalling and telecommunications apparatus EN/IEC 61000-6-2, Immunity industrial environments EN/IEC 61000-6-4, Emission industrial environments EN/IEC 61000-6-5, Immunity power station and substation environment
<b>EMI</b>	FCC Part 15, subpart B
<b>Substation automation</b>	IEEE 1613, Testing Requirements for Communications Networking Devices Installed in Electric Power Substations IEC 61850-3, Communication networks and systems for power utility automation - Part 3: General requirements
<b>Marine</b>	DNV-CG-0339, Environmental test specification for electrical, electronic and programmable equipment and systems
<b>Safety</b>	EN/IEC/UL 61010-1, Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 1: General requirements EN/IEC/UL 61010-2-201, Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 2-201: Particular requirements

Ordering information	
Art. no.	Description
<b>3643-3050</b>	Lynx RB-FT3G-MV

## Specification WeOS 5

The WeOS operating system has been developed by Westermo for its current as well as future range of Ethernet hardware products. This layer 2 and layer 3 switching solution enables Westermo to create complex multimedia ring networks and routing solutions. WeOS not only provides solutions to many challenging industrial networking issues, but also helps to protect investments by ensuring the future availability of fully compatible solutions. WeOS is the core of our latest ranges of Ethernet hardware allowing complex multimedia ring networks and routing solutions to be created.

Westermo has many years of experience developing products for industrial applications. At the heart of all Westermo networking solutions is the need for ease of use. By standardising on a single operating system for all Westermo Ethernet products this helps to simplify the installation, operation and maintenance of individual devices and complete networks. Once a user is familiar with a Westermo product, that knowledge can be readily applied to all our other devices. A web screen simplifies the configuration of many functions, whilst a command line interface allows for fine tuning.

WeOS Standard - Layer 2 protocols and functionality
<b>Resilience and High Availability</b> High-availability Seamless Redundancy (HSR), Parallel Redundancy Protocol (PRP)
<b>Layer 2 Switching</b> IEEE 802.1D MAC Bridges, IEEE 802.1Q Static VLAN and VLAN Tagging, IEEE 802.1AB LLDP
<b>Layer 2 QoS</b> IEEE 802.1p Class of Service with flexible classification (VLAN tag priority)
<b>IP Host Services</b> Static IPv4/v6 Address, DHCP Client, DNS Client, DDNS, ZeroConf (mDNS and SSDP), NTP Client (NTPv4), IPv4/v6 Interfaces (Ethernet, VLAN, Loopback and Blackhole)
<b>Network Servers</b> NTP client (NTPv4), IEEE 1588/PTP Transparent/Boundary Clock (including Power Profile v1/v2)
<b>Management Tools</b> Westermo configuration tool WeConfig, Web interface (HTTP and HTTPS), Command Line Interface (CLI) via console port, SSHv2 and Telnet, Local and Central Authentication (RADIUS/TACACS+), Role Based Access Control (RBAC), Password Compliance Policy, SNMPv1/v2c/v3, Secure Copy (SCP) for remote file upload and download, Local file management (via HTTP, FTP, TFTP and SCP), Load/save files from/to external memory, Configuration and Deployment using external memory, Tech support button, Flexible alarm and event handling system, RFC5424/RFC3164 Syslog (log files and remote syslog server)
<b>SNMP MIB Support (read-only)</b> RFC 1213 MIB-2, RFC 2819 RMON MIB, RFC 2863 Interface MIB, RFC 3433 Entity Sensor MIB, RFC 3635 Ether-like Interface MIB, RFC 4133 Entity MIB, RFC 4188 Bridge MIB, RFC 4363 Q-BRIDGE MIB, RFC 4836 MAU MIB, IEEE 802.1AB LLDP MIB, WESTERMO-DDM MIB (SFP), WESTERMO-EVENT MIB, WESTERMO-INTERFACE MIB