

# Advanced Industrial Ethernet Extender DDW-242-485



- ■ ■ Save time and money reusing old cable and equipment
  - Up to 15.3 Mbit/s Ethernet over twisted pair or 30.6 Mbit/s with bonding
  - Advanced WeOS layer 3 functionality
  - Legacy connection via RS-422/485 port
- ■ ■ Security, legacy resilient networking from WeOS
  - Network IP Security and remote access
  - Port access control and firewall
  - VPN tunnels over SHDSL
- ■ ■ Easy to Use
  - Basic installation with no configuration needed
  - Web screen for simple configuration and CLI for professional use
  - USB fluid configuration for easy maintenance
- ■ ■ Robustly designed for mission critical applications
  - 437 000 hours MTBF to MIL- HDBK -217F for extreme reliability
  - Extensive line diagnostics and fault I/O contact and SNMPv3
  - Robust design for vibration, temperature and dual power input



**EN 50121-4**  
Railway Trackside

**EN 55022**  
ITE Emission

**EN 55024**  
ITE Immunity

**EN 61000-6-1**  
Residential Immunity

**EN 61000-6-2**  
Industrial Immunity

**EN 61000-6-3**  
Residential Emission

**EN 61000-6-4**  
Industrial Emission

Westermo's Ethernet extender technology based on SHDSL makes it possible to reuse many types of pre-existing copper cables, which can lead to considerable financial savings when installing new systems. The Wolverine DDW-242-485 allows effective Ethernet networks to be created over long distances (up to 15 km (9.3 mi)) at data rates up to 15.3 Mbit/s on a single twisted pair cable. By using two pairs "bonded" this rate can be doubled up to 30.6 Mbit/s. The integral switch allows 2 Ethernet devices to be attached and an RS-422/485 port allows for a legacy piece of equipment to be incorporated into the IP network.

Only industrial grade components are used which gives the Wolverine an MTBF of 437,000 hours and ensures a long service life. A wide operating temperature range -40 to +70°C (-40 to +158°F) can be achieved with no moving parts or cooling holes in the case. Wolverine has been tested both by Westermo and external test houses to meet many EMC, isolation, vibration and shock standards, all to the highest levels suitable for heavy industrial environments and rail trackside application.

WeOS has been developed by Westermo to allow us to offer cross platform and future proof solutions. WeOS can deliver unique IP security functionality for this class of product, for instance a Multiport DMZ can be constructed by utilising the internal port based firewall function. Remote secure access to a network can be provided using encrypted VPNs.

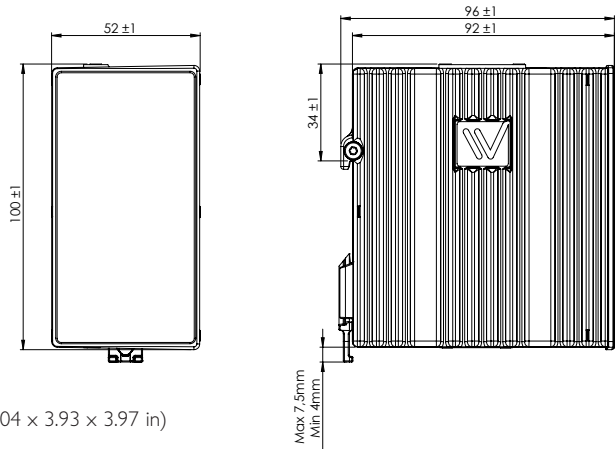
*For more WeOS functionality please see the WeOS datasheet.*

## Ordering Information

Art.no	Description
3642-0330	DDW-242-485
1211-2027	Diagnostic cable (Console) (Accessories)
3125-0001	PS-30, Power supply, DIN mounted (Accessories)

# Specifications DDW-242-485

## Dimensional drawing



Dimension W x H x D 52 x 100 x 101 mm (2.04 x 3.93 x 3.97 in)  
 Weight 0.8 kg  
 Degree of protection IP 40

Power	
Operating voltage	19 to 60 VDC
Rated current	245 mA (405 mA) @ 24 VDC (with 500 mA USB load) 124 mA (200 mA) @ 48 VDC (with 500 mA USB load)

Interfaces	
Ethernet TX	2 x RJ-45, 10 Mbit/s, 100 Mbit/s, manual or auto
SHDSL	2 x 2-position detachable screw terminal
RS-422/485	1 x 4-position detachable screw terminal, 50 bit/s – 2 Mbit/s
Digital I/O	1 x 4-position detachable screw terminal
USB	1 x USB 2.0 host interface
Console	1 x 2.5 mm jack, use only Westermo cable 1211-2027

Temperature	
Operating	-40 to +70°C (-40 to +158°F)
Storage & Transport	-40 to +85°C (-40 to +185°F)

Agency approvals and standards compliance	
EMC	EN 50121-4, Railway signalling and telecommunications apparatus.
	EN 55022 + A1, Information technology equipment. Radio disturbance characteristics. Limits and methods of measurement.
	EN 55024 + A1 + A2, Electromagnetic compatibility – Immunity IT equipment.
	EN 61000-6-1, Immunity residential environments.
	EN 61000-6-2, Immunity industrial environments.
	EN 61000-6-3, Emission residential, commercial and light-industrial environments.
	EN 61000-6-4, Emission industrial environments.
	FCC part 15 Class A and Class B.
	IEC 62236-4, Railway signalling and telecommunications apparatus.
Safety	UL/IEC/EN 60950-1, IT equipment

Specifications may change without prior notice.