EX approved industrial Ethernet Extender
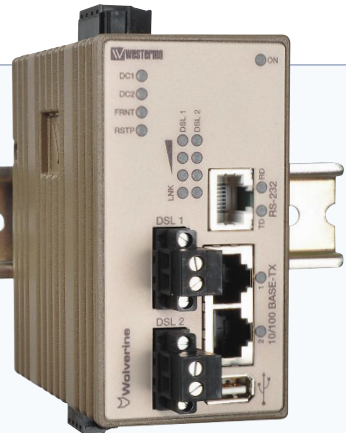## DDW-142-EX

- Global approval for hazardous area use
  - IECEx, International EX standard
  - Atex 94/9/EC, EU directive
- 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
  - 2 port 100 Mbit L2 switch supporting VLAN and QoS
  - Legacy connection via RS-232 port
- Security, legacy resilient networking from WeOS
  - Port access control (802.1x) or MAC authentication
  - RSTP and multimedia ring solutions
  - Modem replacement, serial to IP, Modbus Gateway functions
- 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

CE   FC Part 15   c(UL)us LISTED   TYPE APPROVED PRODUCT DNV   IEC   IECEx   Ex

EN 50121-4 Railway Trackside	**EN 61000-6-1** Residential Immunity
EN 61000-6-2 Industrial Immunity	**EN 61000-6-3** Residential Emission **EN 61000-6-4** Industrial Emission

The Wolverine DDW-142-EX is an Industrial Ethernet Extender, powered by the Westermo WeOS network operating system. Independently tested for IECEX and ATEX by Baseefa the Wolverine is the perfect solution for hazardous area applications in any part of the world.

Westermo 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-142-EX 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-232 port allows for a legacy piece of equipment to be incorporated into the IP network.

The WeOS (Westermo Operating Systems) has been developed to allow cross platform and future proof solutions. WeOS can deliver unique security functionality for this class of product as well as allowing the DDW-142-EX to form part of a resilient multimedia ring network using the Westermo FRNT protocol or industry standard STP/RSTP. WeOS has been developed to provide industrial networking solutions and contains amazing serial connectivity capability – from being able to simulate an old AT modem, convert Modbus RTU to TCP or encapsulate serial data into an IP packet.

The DDW-142-EX is often used in applications on railways, roads or with utilities where failure could result in significant costs. All Westermo products are designed with high MTBF in mind to improve operational reliability and also give long service life. Even features like the SHDSL diagnostics and management allow indication of line degradation allowing planned maintenance. As the unit is designed for these applications Westermo also ensure that testing is carried out to ensure the unit can operate at extremes of temperature, EMC and vibration and still provide robust communications.

Ordering Information	
Art.no	**Description**
3642-5300	DDW-142-EX
1211-2027	Diagnostic cable (Console) (Accessories)
3125-0001	PS-30, Power supply, DIN mounted (Accessories)

Specifications DDW-142-EX

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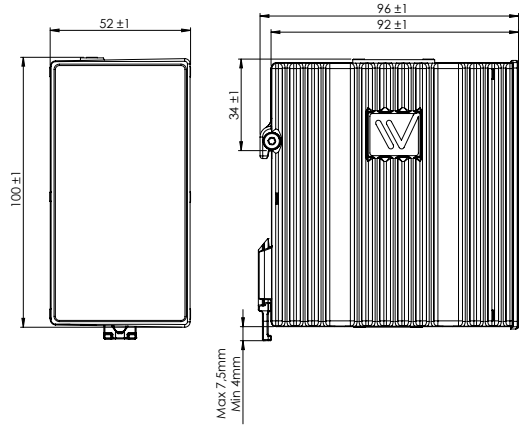
Power	
Operating voltage	19 to 60 VDC
Rated current	245 mA (405 mA) @ 24 VDC (with 500 mA USB load) 124 mA (200 mA) @ 48 VDC (with 500 mA USB load)

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-232	1 x RJ-45, 300 bit/s – 115.2 kbit/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 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
Marine	DNV Standard for Certification no. 2.4
IECEx	Explosive atmosphere IEC 60079-0, General requirements IEC 60079-15, Equipment protected by type of protection "n"
ATEX	Explosive atmosphere EN 60079-0, General requirements EN 60079-15, Equipment protected by type of protection "n"

Specfications may change without prior notice.