

# Ethernet extender with serial support

## DDW-222

- ⌘ Save time and money reusing old cable and equipment
  - Up to 5.7 Mbit/s Ethernet over twisted pair cables
  - Up to 15 km range
  - Legacy connection via RS-232 port
- ⌘ Designed for use in harsh industrial applications
  - Dual 16 – 60 VDC power input
  - Extensive line diagnostics and fault I/O contact
  - TBU – transient blocking unit
- ⌘ Robust for long service life
  - 700,000 hours MTBF to MIL-HDBK-217K
  - –40 to +70°C (–40 to +158°F) with no moving parts
  - Industrial EMC, shock and vibration testing
- ⌘ Resilient and easily managed networking
  - Westermo FRNT ring solution
  - Simple web based configuration
  - SNMP management



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

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

**EN 50121-4**  
Railway Trackside

The Wolverine DDW-222 allows effective Ethernet networks to be created over long distances (up to 15 km) at data rates up to 5.7 Mbit/s. The SHDSL technology makes it possible to reuse many types of pre-existing copper cables which can lead to considerable financial savings. Dependent on cable characteristics, distances up to 15 km (9.3 mi) can be achieved. The integrated RS-232 port allows legacy equipment to become part of an IP backbone network.

With its robust aluminium housing, the DDW-222 is designed for use in heavy duty industrial applications. The wide power range and I/O fault contact make it ideal for easy installation and monitoring in industrial applications. The Transient Blocking Unit (TBU) is acknowledged as the most effective form of protection against damaging noise spikes caused by lightning or high voltage equipment.

Only industrial grade components are used which gives the DDW-222 an MTBF of 700,000 hours and ensures a long service life. A wide operating temperature range of –40 to +70°C (–40 to +158°F) can be achieved without the need for moving parts or cooling holes in the case. The DDW-222 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.

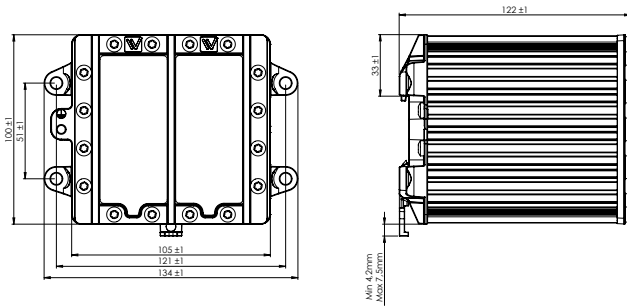
For resilience, a ring of DDW-222s can be created using the Westermo FRNT protocol. This is configured using the simple web interface. For network management, SNMP provides an industry standard solution allowing the DDW-222 to be used as part of a large network.

### Ordering Information

Art.no	Description
3642-0220	DDW-222
3125-0001	PS-30, Power supply, DIN mounted (Accessories)

# Specifications DDW-222

## Dimensional drawing



Dimension W x H x D 134 x 100 x 122 mm (5.25 x 3.93 x 4.80 in)

Weight 1.5 kg

Degree of protection IP 40

## Speed and Distance

Speed bit/s	DDW-222 @ 0.5 mm <sup>2</sup>	DDW-222 @ 0.4 mm <sup>2</sup>
	Distance metre / miles	Distance metre / miles
192000	10000 / 6.21	6450 / 4.00
1024000	7650 / 4.75	4850 / 3.01
1280000	7050 / 4.38	4700 / 2.92
2304000	5950 / 3.69	4150 / 2.58
3328000	4900 / 3.04	3700 / 2.30
4544000	4250 / 2.64	3150 / 1.95
5696000	3650 / 2.26	2800 / 1.73

Distance is tested without noise.

### Power

Operating voltage	16 to 60 VDC
Rated current	300 mA @ 20 VDC 150 mA @ 48 VDC

### Interfaces

RS-232	1 x 9-pin D-sub (male), 300 bit/s to 115.2 kbit/s
Ethernet TX	4 x RJ-45, 10 Mbit/s or 100 Mbit/s
DSL	2 x 2-position detachable screw terminal, 192 kbit/s to 5.7 Mbit/s

### Temperature

Operating	-40 to +70°C (-40 to +158°F)
Storage & Transport	-40 to +70°C (-40 to +158°F)
Maximum surface temperature	135°C (275°F) (temperature class T4)

### Agency approvals and standards compliance

EMC	EN 61000-6-2, Immunity industrial environments
	EN 55024, Immunity IT equipment
	EN 61000-6-4, Emission industrial environments
	FCC part 15 Class A
	EN 50121-4, Railway signalling and telecommunications apparatus
Safety	EN 60950-1, IT equipment.
SHDSL	ITU-T G.991.2.
ATEX	EN 60079-0 and EN 60079-15. (Ex nA IIC T4 Gc)
FM Approvals	Class 1 Div 2