Westermo ®

Wolverine

Industrial Ethernet Extender
DDW-220

⊞ 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
  - Transparent to industrial protocols

⊞ 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

⊞ Easy configuration and management
  - Simple web based configuration
  - SNMP management
  - 4 port managed switch

CE FC
Part 15

Ex
APPROVED
Class 1, Div 2

FM
APPROVED

EN 61000-6-2
Industrial Immunity

EN 61000-6-4
Industrial Emission

EN 50121-4
Railway Trackside

The Wolverine DDW-220 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 protocol transparent link allows any industrial protocol to pass unhindered ensuring the unit is easy to use.

With its robust aluminium housing, the DDW-220 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.

Only industrial grade components are used which gives the DDW-220 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-220 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.
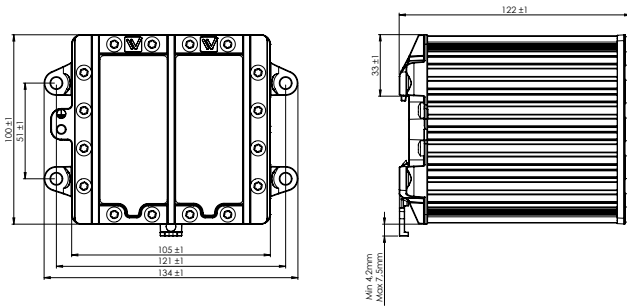
The DDW-220 is designed for daisy chain applications over an SHDSL line. At each location, a local network can then be configured using the integrated L2 switch. The switches support QoS (Quality of Service) with four priority queues and strict priority scheduling as well as HoL (Head of Line Blocking Prevention).

Ordering Information

Art.no	Description
3642-0200	DDW-220
3125-0001	PS-30, Power supply, DIN mounted (Accessories)

Specifications DDW-220

	DDW-220 @ 0.5 mm²	DDW-220 @ 0.4 mm²
Speed bit/s	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.

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

Power

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

Interfaces

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 G)
FM Approvals	Class 1 Div 2