



# Product Guide

## Industrial Data Communications



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# Industrial Data Communications Heritage

**Produced by:**

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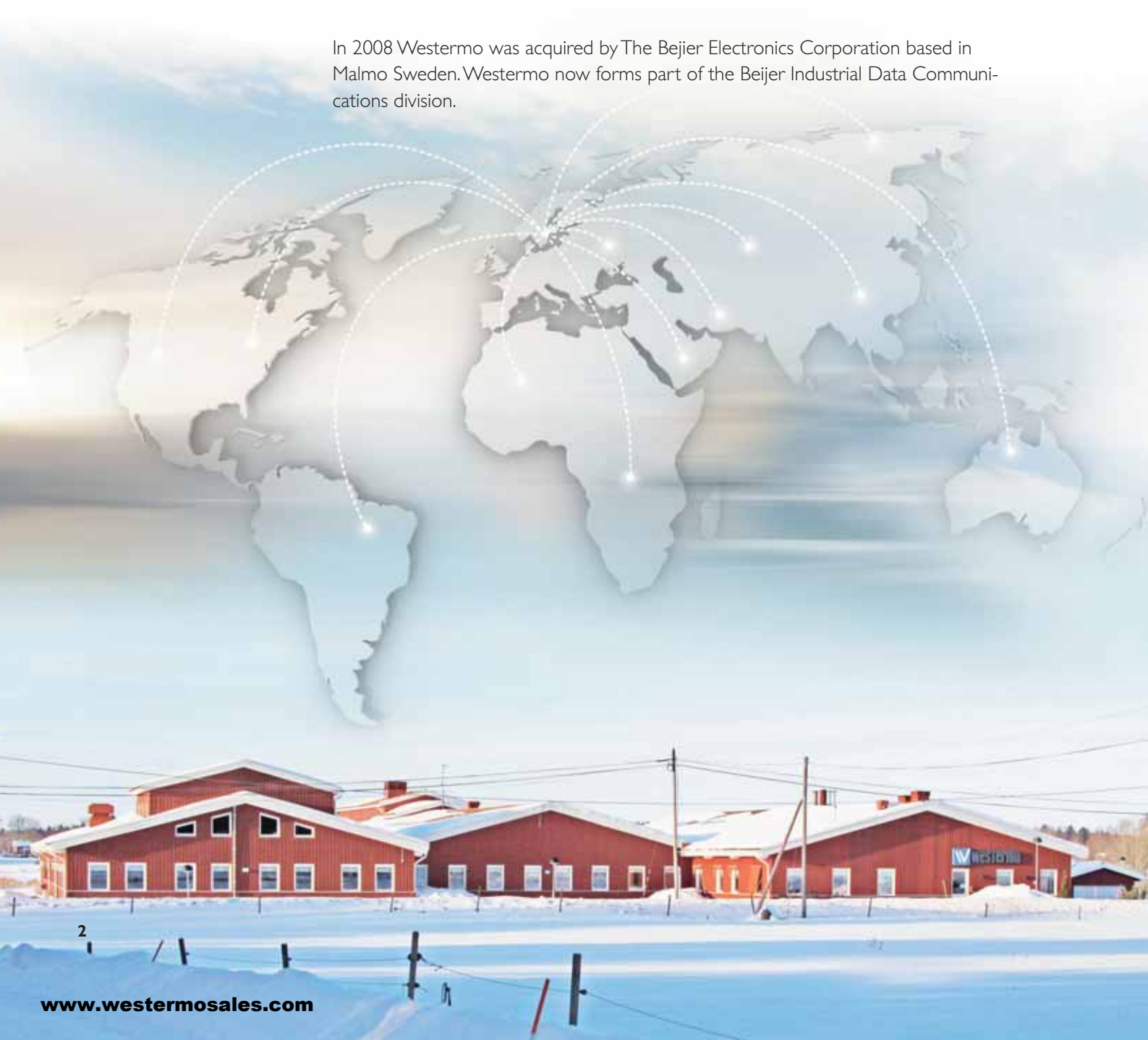
*Specifications are subject to change without notice due to continuous product development and improvement.*

Westermo was established in 1975. The head office is located 150 km (93.2 miles) southwest of Stockholm in Sweden. Over the past three decades Westermo has grown with subsidiaries being established in Sweden, UK, Germany, France, Singapore, North America, Taiwan and sales partners appointed in over 35 countries worldwide.

The first Westermo data communications product was an RS-232 line driver called the KM-1 that allowed data to be transmitted over great distances using twisted pair cables. Today we still sell a product, the MD-12, that is plug compatible with this device.

In the 1990s Westermo created the world's first industrial DIN rail mount telephone modem the TD-22 pioneering remote access solutions for industrial devices like PLCs and HMIs.

In 2008 Westermo was acquired by The Beijer Electronics Corporation based in Malmo Sweden. Westermo now forms part of the Beijer Industrial Data Communications division.



# A product range to meet every requirement

Westermo provides a full range of data communications solutions for demanding applications in the transport, water and energy markets among others. For the past 40 years, we have been at the forefront of technological development and often push the limits of what is technically possible.

The staff at Westermo offers the highest possible service to help our customers to select, configure and install the best solution for their specific needs. Our knowledge goes far beyond our own product range, regardless of whether the installation is in a substation, water treatment plant or alongside a railway. In order to provide the best possible support, we have local presence in more than 35 countries through our authorized distributors and own offices.

## Quality

Westermo strives for the highest quality. To this end, we will endeavour to supply products, goods and services in a courteous fashion that reflects our commitment to the Quality Policy as summarized below, therefore, we will;

- Understand our customer's requirements and needs as well as relevant regulations, so as to develop, manufacture and offer the right products
- Give our customers excellent support throughout the entire business process
- Keep up our never ending commitment for even better quality and effectiveness

This gives and will continue to give us stability, long term growth and profitability

## Technical support

Westermo has always believed in providing the best technical service possible to help our customers get their systems operational. All our subsidiaries employ significant technical support departments that allow us to give free of charge telephone technical support in a number of languages during normal office hours. We also commit many hours to working with other product vendors to produce product application notes that can be downloaded from the web at any time.



*For more information about products and services from Westermo, please visit our website at [www.westermo.com](http://www.westermo.com).*

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# Ethernet Switches

- *Managed Switches*
- *Unmanaged Switches*
- *Managed PoE Ethernet Switch*
- *Unmanaged PoE Ethernet Switch*

*The Westermo range of industrial Ethernet switches are designed for use in harsh environments and allow the creation of cost-effective, reliable and secure networks.*

*Our extensive knowledge of the various standards used in railway, defence, water treatment, substation automation and road applications means we have the ideal solution for our customers, regardless of the environment.*



*Switches that can  
withstand all industrial  
environments*



# Managed Ethernet Switches



Product/Art. no	Description
<p><b>L105-S1</b> 3643-0210</p>  <p><b>L105-S1-EX</b> 3643-5210</p>	<p><b>Managed Device Server Switch</b> 4 x 10/100 Mbit/s, Ethernet TX, RJ-45 1 x Digital I/O 1 x RS-232, RJ-45 1 x USB 1 x 2.5 mm jack, console Operating voltage: 19 to 60 VDC Operating temperature: -40 to +70°C (-40 to +158°F)</p>
<p><b>L205-S1</b> 3643-0215</p>  <p><b>L205-S1-EX</b> 3643-5215</p>	<p><b>Managed Device Server Switch with Routing Functionality</b> 4 x 10/100 Mbit/s, Ethernet TX, RJ-45 1 x Digital I/O 1 x RS-232, RJ-45 1 x USB 1 x 2.5 mm jack, console Operating voltage: 19 to 60 VDC Operating temperature: -40 to +70°C (-40 to +158°F)</p>
<p><b>L106-S2</b> 3643-0220</p>  <p><b>L106-S2-EX</b> 3643-5220</p>	<p><b>Managed Device Server Switch</b> 4 x 10/100 Mbit/s, Ethernet TX, RJ-45 1 x Digital I/O 1 x RS-232, RJ-45 1 x RS-232/422/485, RJ-45 1 x USB 1 x 2.5 mm jack, console Operating voltage: 19 to 60 VDC Operating temperature: -40 to +70°C (-40 to +158°F)</p>
<p><b>L206-S2</b> 3643-0225</p>  <p><b>L206-S2-EX</b> 3643-5225</p>	<p><b>Managed Device Server Switch with Routing Functionality</b> 4 x 10/100 Mbit/s, Ethernet TX, RJ-45 1 x Digital I/O 1 x RS-232, RJ-45 1 x RS-232/422/485, RJ-45 1 x USB 1 x 2.5 mm jack, console Operating voltage: 19 to 60 VDC Operating temperature: -40 to +70°C (-40 to +158°F)</p>
<p><b>L108-F2G-S2</b> 3643-0200</p>  <p><b>L108-F2G-S2-EX</b> 3643-5200</p>	<p><b>Managed Device Server Switch</b> 4 x 10/100 Mbit/s, Ethernet TX, RJ-45 2 x 100/1000 Mbit/s, pluggable connections transceivers supported, Ethernet FX or TX, SFP 1 x Digital I/O 1 x RS-232, RJ-45 1 x RS-232/422/485, RJ-45 1 x USB 1 x 2.5 mm jack, console Operating voltage: 19 to 60 VDC Operating temperature: -40 to +70°C (-40 to +158°F)</p>



Product/Art. no	Description
<p><b>L208-F2G-S2</b> 3643-0205</p>  <p><b>L208-F2G-S2-EX</b> 3643-5205</p>	<p><b>Managed Device Server Switch with Routing Functionality</b>            4 × 10/100 Mbit/s, Ethernet TX, RJ-45            2 × 100/1000 Mbit/s, pluggable connections transceivers supported,            Ethernet FX or TX, SFP            1 × Digital I/O            1 × RS-232, RJ-45            1 × RS-232/422/485, RJ-45            1 × USB            1 × 2.5 mm jack, console            Operating voltage: 19 to 60VDC            Operating temperature: -40 to +70°C (-40 to +158°F)</p>
<p><b>L106-F2G</b> 3643-0230</p>  <p><b>L106-F2G-EX</b> 3643-5230</p>	<p><b>Managed Ethernet Switch</b>            4 × 10/100 Mbit/s, Ethernet TX, RJ-45            2 × 100/1000 Mbit/s, pluggable connections transceivers supported,            Ethernet FX or TX, SFP            1 × Digital I/O            1 × USB            1 × 2.5 mm jack, console            Operating voltage: 19 to 60VDC            Operating temperature: -40 to +70°C (-40 to +158°F)</p>
<p><b>L206-F2G</b> 3643-0235</p>  <p><b>L206-F2G-EX</b> 3643-5235</p>	<p><b>Managed Ethernet Switch with Routing Functionality</b>            4 × 10/100 Mbit/s, Ethernet TX, RJ-45            2 × 100/1000 Mbit/s, pluggable connections transceivers supported,            Ethernet FX or TX, SFP            1 × Digital I/O            1 × USB            1 × 2.5 mm jack, console            Operating voltage: 19 to 60VDC            Operating temperature: -40 to +70°C (-40 to +158°F)</p>
<p><b>L110-F2G</b> 3643-0100</p>  <p><b>L110-F2G-EX</b> 3643-5100</p>	<p><b>Managed Ethernet Switch</b>            8 × 10/100 Mbit/s, Ethernet TX, RJ-45            2 × 100/1000 Mbit/s, pluggable connections transceivers supported,            Ethernet FX or TX, SFP            1 × Digital I/O            1 × 2.5 mm jack, console            Operating voltage: 19 to 60VDC            Operating temperature: -40 to +70°C (-40 to +158°F)</p>
<p><b>L210-F2G</b> 3643-0105</p>  <p><b>L210-F2G-EX</b> 3643-5105</p>	<p><b>Managed Ethernet Switch with Routing Functionality</b>            8 × 10/100 Mbit/s, Ethernet TX, RJ-45            2 × 100/1000 Mbit/s, pluggable connections transceivers supported.            Ethernet FX or TX, SFP            1 × Digital I/O            1 × 2.5 mm jack, console            Operating voltage: 19 to 60VDC            Operating temperature: -40 to +70°C (-40 to +158°F)</p>



Product/Art. no	Description
<b>RFI-207-F4G-T3G</b> 3641-4210 	<b>Industrial Routing Switch</b> 3 x 10/100/1000 Mbit/s, Ethernet TX, RJ-45 4 x 100/1000 Mbit/s, pluggable connections transceivers supported, Ethernet FX or TX (TX support 10/100/1000 Mbit/s, copper transceiver), SFP 1 x Digital I/O 1 x micro USB, console 1 x USB Operating voltage: 16 to 60 VDC Operating temperature: -40 to +70°C (-40 to +158°F)
<b>RFI-211-T3G</b> 3641-4110 	<b>Industrial Routing Switch</b> 3 x 10/100/1000 Mbit/s, Ethernet TX, RJ-45 8 x 10/100 Mbit/s, Ethernet TX, RJ-45 1 x Digital I/O 1 x micro USB, console 1 x USB Operating voltage: 16 to 60 VDC Operating temperature: -40 to +70°C (-40 to +158°F)
<b>RFI-211-F4G-T7G</b> 36414310 	<b>Industrial Routing Switch</b> 7 x 10/100/1000 Mbit/s, Gigabit Ethernet TX, RJ-45 4 x 100/1000 Mbit/s, pluggable connections transceivers supported, Ethernet FX or TX (TX support 10/100/1000 Mbit/s, copper transceiver), SFP 1 x Digital I/O 1 x micro USB, console 1 x USB Operating voltage: 16 to 60 VDC Operating temperature: -40 to +70°C (-40 to +158°F)
<b>RFI-219-T3G</b> 3641-4100 	<b>Industrial Routing Switch</b> 3x 10/100/1000 Mbit/s, Ethernet TX, RJ-45 16 x 10/100 Mbit/s, Ethernet TX, RJ-45 1 x Digital I/O 1 x micro USB, console 1 x USB Operating voltage: 16 to 60 VDC Operating temperature: -40 to +70°C (-40 to +158°F)
<b>RFI-215-F4G-T3G</b> 3641-4200 	<b>Industrial Routing Switch</b> 3 x 10/100/1000 Mbit/s, Ethernet TX, RJ-45 8 x 10/100 Mbit/s, Ethernet TX, RJ-45 4 x 100/1000 Mbit/s, pluggable connections transceivers supported, Ethernet FX or TX (TX support 10/100/1000 Mbit/s, copper transceiver), SFP 1 x Digital I/O 1 x micro USB, console 1 x USB Operating voltage: 16 to 60 VDC Operating temperature: -40 to +70°C (-40 to +158°F)
<b>RFI-219-F4G-T7G</b> 3641-4300 	<b>Industrial Routing Switch</b> 8 x 10/100 Mbit/s, Ethernet TX, RJ-45 7 x 10/100/1000 Mbit/s, Gigabit Ethernet TX, RJ-45 4 x 100/1000 Mbit/s, pluggable connections transceivers supported, Ethernet FX or TX (TX support 10/100/1000 Mbit/s, copper transceiver), SFP 1 x Digital I/O 1 x micro USB, console 1 x USB Operating voltage: 16 to 60 VDC Operating temperature: -40 to +70°C (-40 to +158°F)





Product/Art. no	Description
<p><b>RFI-219-F4G-T7G-F8</b> 3641-4320</p> 	<p><b>Industrial Routing Switch</b> 7 × 10/100/1000 Mbit/s, Gigabit Ethernet TX, RJ-45 4 × 100/1000 Mbit/s, pluggable connections transceivers supported, Ethernet FX or TX (TX support 10/100/1000 Mbit/s, copper transceiver), SFP 8 × 100 Mbit/s, pluggable connections transceivers supported, Ethernet FX or TX (TX support 10/100 Mbit/s, copper transceiver), SFP 1 × Digital I/O 1 × micro USB, console 1 × USB Operating voltage: 16 to 60VDC Operating temperature: -40 to +70°C (-40 to +158°F)</p>
<p><b>RFIR-219-F4G-T7G-AC</b> 3641-4015</p> 	<p><b>Industrial Routing Switch</b> 7 × 10/100/1000 Mbit/s, Ethernet TX, RJ-45 4 × 100/1000 Mbit/s, pluggable connections transceivers supported, Ethernet FX or TX (TX support 10/100/1000 Mbit/s, copper transceiver), SFP 8 × 10/100 Mbit/s, Ethernet FX, RJ-45 1 × Digital I/O 1 × mini USB, console 1 × USB Operating voltage: 90 to 264VAC Operating temperature: -40 to +55°C (-40 to +131°F)</p>
<p><b>RFIR-219-F4G-T7G-DC</b> 3641-4005</p> 	<p><b>Industrial Routing Switch</b> 7 × 10/100/1000 Mbit/s, Ethernet TX, RJ-45 4 × 100/1000 Mbit/s, pluggable connections transceivers supported, Ethernet FX or TX (TX support 10/100/1000 Mbit/s, copper transceiver), SFP 8 × 10/100 Mbit/s, Ethernet FX, RJ-45 1 × Digital I/O 1 × mini USB, console 1 × USB Operating voltage: 16 to 60VDC Operating temperature: -40 to +70°C (-40 to +158°F)</p>
<p><b>RFIR-227-F4G-T7G-AC</b> 3641-4035</p> 	<p><b>Industrial Routing Switch</b> 7 × 10/100/1000 Mbit/s, Ethernet TX, RJ-45 4 × 100/1000 Mbit/s, pluggable connections transceivers supported, Ethernet FX or TX (TX support 10/100/1000 Mbit/s, copper transceiver), SFP 16 × 10/100 Mbit/s, Ethernet FX, RJ-45 1 × Digital I/O 1 × mini USB, console 1 × USB Operating voltage: 90 to 264VAC Operating temperature: -40 to +55°C (-40 to +131°F)</p>
<p><b>RFIR-227-F4G-T7G-DC</b> 3641-4025</p> 	<p><b>Industrial Routing Switch</b> 7 × 10/100/1000 Mbit/s, Ethernet TX, RJ-45 4 × 100/1000 Mbit/s, pluggable connections transceivers supported, Ethernet FX or TX (TX support 10/100/1000 Mbit/s, copper transceiver), SFP 16 × 10/100 Mbit/s, Ethernet FX, RJ-45 1 × Digital I/O 1 × mini USB, console 1 × USB Operating voltage: 16 to 60VDC Operating temperature: -40 to +70°C (-40 to +158°F)</p>



Product/Art. no

Description

RFR-212-FB  
3641-1640



**EN50155 Backbone Routing Switch**  
12 x 10/100 Mbit/s, Ethernet TX, M12  
Dual by-pass relays  
1 x M12 USB configuration plug  
Operating voltage: 16.8 to 143 VDC  
Operating temperature: -40 to +70°C (-40 to +158°F)



**Viper**

Product/Art. no

Description

Viper-408  
3641-0360



**EN50155 M12 Switch**  
8 x 10/100 Mbit/s, Ethernet TX, M12  
Operating voltage: 16.8 to 143 VDC  
Operating temperature: -40 to +70°C (-40 to +158°F)

Viper-408  
with E-mark  
3641-6360



**EN50155 M12 Switch**  
8 x 10/100 Mbit/s, Ethernet TX, M12  
Operating voltage: 16.8 to 143 VDC  
Operating temperature: -40 to +70°C (-40 to +158°F)



Product/Art. no

Description

Viper-112  
3641-0555



**EN50155 Switch**  
12 x M12, 10/100 Mbit/s, Ethernet TX  
1 x USB  
1 x Console port, RS-232  
Operating voltage: 16.8 to 143 VDC  
Operating temperature: -40 to +70°C (-40 to +158°F)

Viper-212  
3641-0560



**EN 50155 Routing Switch**  
12 x 10/100 Mbit/s, Ethernet TX, M12  
1 x USB  
1 x Console port, RS-232  
Operating voltage: 16.8 to 143 VDC  
Operating temperature: -40 to +70°C (-40 to +158°F)

Viper-112-  
T3G  
3641-0530



**EN 50155 GigE Switch**  
9 x 10/100 Mbit/s, Ethernet TX, M12  
3 x 10/100/1000 Mbit/s, Ethernet TX, M12  
1 x USB  
1 x Console port, RS-232  
Operating voltage: 16.8 to 143 VDC  
Operating temperature: -40 to +70°C (-40 to +158°F)


Viper-212-  
T3G  
3641-0550





**EN 50155 GigE Routing Switch**  
9 x 10/100 Mbit/s, Ethernet TX, M12  
3 x 10/100/1000 Mbit/s, Ethernet TX, M12  
1 x USB  
1 x Console port, RS-232  
Operating voltage: 16.8 to 143 VDC  
Operating temperature: -40 to +70°C (-40 to +158°F)

Product/Art. no.	Description
<p><b>MDI-110-F3</b> 3624-0200</p> 	<p><b>Fast Ethernet Switch</b> 7 × 10/100 Mbit/s, Ethernet TX, RJ-45 3 × 10/100 Mbit/s, Ethernet TX or 100 Mbit/s, Ethernet FX, SFP combo ports Operating voltage: 10 to 60VDC Operating temperature: -25 to 70°C (-13 to +158°F)</p>
<p><b>MDI-110-F3G</b> 3624-0210</p> 	<p><b>Gigabit Ethernet Switch</b> 7 × 10/100 Mbit/s, Ethernet TX, RJ-45 3 × 10/100/1000 Mbit/s, Ethernet TX or 100/1000 Mbit/s, Ethernet FX, SFP combo ports Operating voltage: 10 to 60VDC Operating temperature: -25 to 70°C (-13 to +158°F)</p>
<p><b>MDI-112-F4G</b> 3624-0250</p> 	<p><b>Gigabit Ethernet Switch</b> 8 × 10/100 Mbit/s, Ethernet TX, RJ-45 2 × 10/100/1000 Mbit/s, Ethernet TX or 1000 Mbit/s, Ethernet FX, SFP combo ports 2 × 1000 Mbit/s, Ethernet FX, SFP Operating voltage: 10 to 60VDC Operating temperature: -25 to 70°C (-13 to +158°F)</p>
<p><b>MDI-118-F2G</b> 3624-0260</p> 	<p><b>Gigabit Ethernet Switch</b> 16 × 10/100 Mbit/s, Ethernet TX, RJ-45 2 × 10/100/1000 Mbit/s, Ethernet TX or 1000 Mbit/s, Ethernet FX, SFP combo ports Operating voltage: 10 to 60VDC Operating temperature: -25 to 70°C (-13 to +158°F)</p>
<p><b>MRI-128-F4G</b> 3624-0340</p> 	<p><b>Gigabit Rack-mount Switch</b> 24 × 10/100 Mbit/s, Ethernet TX, RJ-45 4 × 10/100/1000 Mbit/s, Ethernet TX or 1000 Mbit/s, Ethernet FX, SFP compo ports Operating voltage: 90 - 264 VAC Operating temperature: -25 to 70°C (-13 to +158°F)</p>
<p><b>MRI-128-F4G/DC</b> 3624-0350</p> 	<p><b>Gigabit Rack-mount Switch</b> 24 × 10/100 Mbit/s, Ethernet TX, RJ-45 4 × 10/100/1000 Mbit/s, Ethernet TX or 1000 Mbit/s, Ethernet FX, SFP compo ports Operating voltage: 12 to 48VDC Operating temperature: -25 to 70°C (-13 to +158°F)</p>




# Unmanaged Ethernet Switches




Product/Art. no	Description
<b>SDW-500-series</b> 3644-xxxx  <b>SDW-500 EX-series</b> 3644-xxxx	 <p><b>Industrial Ethernet 5-port Switch</b></p> <p><b>SDW-532</b>                      3 × 10/100 Mbit/s, Ethernet TX, RJ-45                      2 × 100 Mbit/s, Ethernet FX, LC, SC or ST connector</p> <p><b>SDW-541</b>                      4 × 10/100 Mbit/s, Ethernet TX, RJ-45                      1 × 100 Mbit/s, Ethernet FX, LC, SC or ST connector</p> <p><b>SDW-550</b>                      5 × 10/100 Mbit/s, Ethernet TX, RJ-45                      Operating voltage: 96 to 57.6 VDC                      Operating temperature: -25 to +70°C (-13 to +158°F)</p>



Product/Art. no	Description
<b>Viper-008</b> 3641-0340	 <p><b>EN50155 M12 Switch</b>                      8 × 10/100 Mbit/s, Ethernet TX, M12                      Operating voltage: 16.8 to 143 VDC                      Operating temperature: -40 to +70°C (-40 to +158°F)</p>
<b>Viper-012</b> 3641-0540	 <p><b>EN50155 Switch</b>                      12 × 10/100 Mbit/s, Ethernet TX, M12                      1 × Service ports that must not be used                      Operating voltage: 16.8 to 143 VDC                      Operating temperature: -40 to +70°C (-40 to +158°F)</p>






Product/Art. no.	Description
<b>SDI-541-MM-SC2</b> 3625-0001	 <p><b>5-port Ethernet Fibre Switch</b>                      4 × 10/100 Mbit/s, Ethernet TX, RJ-45                      1 × 100 Mbit/s, Ethernet FX, Multi-mode 2 km, SC connector                      1 × Power/Relay, 4-pin terminal block                      Operating voltage: 18 to 32 VDC or 18 to 27 VAC                      Operating temperature: -10 to +60°C (14 to +140°F)</p>
<b>SDI-541-SM-SC30</b> 3625-0010	 <p><b>5-port Ethernet Fibre Switch</b>                      4 × 10/100 Mbit/s, Ethernet TX, RJ-45                      1 × 100 Mbit/s, Ethernet FX, Single-mode 30 km, SC connector                      1 × Power/Relay, 4-pin terminal block                      Operating voltage: 18 to 32 VDC or 18 to 27 VAC                      Operating temperature: -10 to +60°C (14 to +140°F)</p>
<b>SDI-550</b> 3625-0050	 <p><b>5-port Ethernet Switch</b>                      5 × 10/100 Mbit/s, Ethernet TX, RJ-45                      1 × Power/Relay, 4-pin terminal block                      Operating voltage: 18 to 32 VDC or 18 to 27 VAC                      Operating temperature: -20 to +70°C (-14 to +158°F)</p>

Product/Art. no.	Description
<b>SDI-862-MM-SC2</b> 3625-0110 	<b>8-port Ethernet Fibre Switch</b> 6 × 10/100 Mbit/s, Ethernet TX, RJ-45 2 × 100 Mbit/s, Ethernet FX, Multi-mode 2 km, SC connector 1 × Alarm relay, Terminal block connector with 1 A @ DC 24V carry ability Operating voltage: 10 to 60VDC Operating temperature: -10 to +70°C (-13 to +158°F)
<b>SDI-862-SM-SC30</b> 3625-0120 	<b>8-port Ethernet Fibre Switch</b> 6 × 10/100 Mbit/s, Ethernet TX, RJ-45 2 × 100 Mbit/s, Ethernet FX, Single-mode 30 km, SC connector 1 × Alarm relay, Terminal block connector with 1 A @ DC 24V carry ability Operating voltage: 10 to 60VDC Operating temperature: -10 to +70°C (-13 to +158°F)
<b>SDI-880</b> 3625-0100 	<b>8-port Ethernet Switch</b> 8 × 10/100 Mbit/s, Ethernet TX, RJ-45 1 × Alarm relay, Terminal block connector with 1 A @ DC 24V carry ability Operating voltage: 10 to 60VDC Operating temperature: -25 to +70°C (-13 to +158°F)

## Managed PoE Ethernet Switches



Product/Art. no.	Description
<b>Viper-112-P8</b> 3641-0580 	<b>EN 50155 PoE Switch</b> 12 × 10/100 Mbit/s, Ethernet TX, M12 (8 with PoE capability) 1 × USB 1 × Console port, RS-232 Operating voltage: 33.6 to 143VDC Operating temperature: -40 to +70°C (-40 to +158°F)
<b>Viper-212-P8</b> 3641-0590 	<b>EN 50155 PoE Routing Switch</b> 12 × 10/100 Mbit/s, Ethernet TX, M12 (8 with PoE capability) 1 × USB 1 × Console port, RS-232 Operating voltage: 33.6 to 143VDC Operating temperature: -40 to +70°C (-40 to +158°F)
<b>Viper-112-T3G-P8</b> 3641-0570 	<b>EN 50155 PoE GigE Switch</b> 9 × 10/100 Mbit/s, Ethernet TX, M12 (8 with PoE capability) 3 × 10/100/1000 Mbit/s, Ethernet TX, M12 1 × USB 1 × Console port, RS-232 Operating voltage: 33.6 to 143VDC Operating temperature: -40 to +70°C (-40 to +158°F)





**Viper**

Product/Art. no

Description

Viper-  
212-T3G-P8  
3641-  
0595



**EN 50155 PoE GigE Routing Switch**

9 x 10/100 Mbit/s, Ethernet TX, M12 (8 with PoE capability)  
3 x 10/100/1000 Mbit/s, Ethernet TX, M12  
1 x USB  
1 x Console port, RS-232  
Operating voltage: 33.6 to 143 VDC  
Operating temperature: -40 to +70°C (-40 to +158°F)

**i-line**

Product/Art. no.

Description

PMI-110-  
F2G  
3626-  
0200



**Managed PoE Switch**

8 x 10/100 Mbit/s Ethernet TX, RJ-45, PoE  
2 x 10/100/1000 Mbit/s, Ethernet TX or 100/1000 Mbit/s,  
Ethernet FX, SFP combo ports  
Operating voltage: 46 to 57 VDC  
Operating temperature: -40 to +70°C (-40 to +158°F)

MRI-128-  
F4G-PSE24  
3624-0370



**Rackmount PoE Switch**

24 x 10/100 Mbit/s, Ethernet TX, PoE  
4 x 10/100/1000 Mbit/s, Ethernet TX or 1000 Mbit/s Ethernet  
FX, SFP combo ports  
Operating voltage: 46 to 57 VDC or 90 to 264 VAC  
Operating temperature: -25 to +65°C (-13 to +149°F)

# Unmanaged PoE Ethernet Switches

i-line		
Product/Art. no.		Description
<b>PII-2G</b> 3626-0300		<b>Industrial 2-Port PoE Injector</b> 2 × 10/100/1000 Mbit/s, Ethernet TX, RJ-45 2 × 10/100/1000 Mbit/s, Ethernet TX, RJ-45, PoE Operating voltage: 46 to 57 VDC Operating temperature: -40 to +70°C (-40 to +158°F)
<b>PSI-660G</b> 3626-0100		<b>PoE booster Switch</b> 4 × 10/100 Mbit/s Ethernet TX, RJ-45, PoE 2 × 10/100/1000 Mbit/s, Ethernet TX, RJ-45 Operating voltage: 12 to 24 VDC Operating temperature: -25 to +60°C (-13 to +140°F)
<b>PSI-1010G-24V</b> 3626-0110		<b>PoE booster Switch</b> 8 × 10/100 Mbit/s Ethernet TX, RJ-45, PoE 2 × 10/100/1000 Mbit/s, Ethernet TX, RJ-45 Operating voltage: 12 to 24 VDC Operating temperature: -25 to +60°C (-13 to +140°F)
<b>PSI-1010G-48V</b> 3626-0120		<b>PoE Switch</b> 8 × 10/100 Mbit/s Ethernet TX, RJ-45, PoE 2 × 10/100/1000 Mbit/s, Ethernet TX, RJ-45 Operating voltage: 46 to 57 VDC Operating temperature: -25 to +70°C (-13 to +158°F)
<b>PSI-1010-F2G-48V</b> 3626-0150		<b>PoE Switch</b> 8 × 10/100 Mbit/s Ethernet TX, RJ-45, PoE 2 × SFP Gigabit fibre. Operating voltage: 46 to 57 VDC Operating temperature: -25 to +60°C (-13 to +140°F)

# Ethernet Extenders

- *Point-to-point*
- *Managed network*

*The Westermo Wolverine series of industrial Ethernet extenders allow cost-effective Ethernet networks to be created over long distances, at high data rates. The SHDSL technology employed makes it possible to reuse many types of pre-existing cabling which in turn can lead to considerable financial savings.*


*With support for multidrop networks, redundant rings, legacy serial connections and layer 3 routing functions, our range of Ethernet extenders can meet any demand the application requires.*

*Extend  
networks far  
beyond the normal  
limits of Ethernet*





# Point-to-Point Ethernet Extenders



Product/Art. no	Description
<b>DDW-120</b> 3621-0110  <b>DDW-120 EX</b> 3621-5110	 <p><b>Ethernet SHDSL Extender</b>                      1 x 10/100 Mbit/s, Ethernet TX, RJ-45                      1 x 192 kbit/s to 15.3 Mbit/s, DSL, 2 position detachable screw terminal                      1 x 115.2 kbit/s, Diagnostic port, 2.5 mm jack                      Operating voltage: 9.6 to 57.6VDC                      Operating temperature: -40 to +70°C (-40 to +158°F)</p>





# Managed Network Ethernet Extenders



Product/Art. no	Description
<b>DDW-220</b> 3642-0200	 <p><b>Industrial Ethernet Extender</b>                      4 x 10/100 Mbit/s, Ethernet TX, RJ-45                      2 x 192 kbit/s to 5.7 Mbit/s, DSL, 2-position detachable screw terminal                      Operating voltage: 16 to 60VDC                      Operating temperature: -40 to +70°C (-40 to +158°F)</p>
<b>DDW-222</b> 3642-0220	 <p><b>Ethernet extender with serial support</b>                      4 x 10/100 Mbit/s, Ethernet TX, RJ-45                      1 x 300 bit/s to 115.2 kbit/s, RS-232, 9-pin D-sub (male)                      2 x 192 kbit/s to 5.7 Mbit/s, DSL, 2-position detachable screw terminal                      Operating voltage: 16 to 60VDC                      Operating temperature: -40 to +70°C (-40 to +158°F)</p>





Product/Art. no	Description
<p><b>DDW-142</b> 3642-0300</p> <p><b>DDW-142-EX</b> 3642-5300</p> 	<p><b>Industrial Ethernet Extender</b>            2 x 10/100 Mbit/s, Ethernet TX, RJ-45            2 x 32 kbit/s to 15.3 Mbit/s (30.4 with bonding), SHDSL,            2-position detachable screw terminal            1 x 300 bit/s to 115.2 kbit/s, RS-232, RJ-45            1 x Digital I/O, 4-position detachable screw terminal            1 x USB 1 x 2.5 mm jack, Console            Operating voltage: 19 to 60VDC            Operating temperature: -40 to +70°C (-40 to +158°F)</p>
<p><b>DDW-142-485</b> 3642-0310</p> 	<p><b>Industrial Ethernet Extender</b>            2 x 10/100 Mbit/s, Ethernet TX, RJ-45            2 x 32 kbit/s to 15.3 Mbit/s (30.4 with bonding), SHDSL,            2-position detachable screw terminal            1 x 50 bit/s to 2Mbit/s, RS-422/485, 4-position detachable screw terminal            1 x Digital I/O, 4-position detachable screw terminal            1 x USB 1 x 2.5 mm jack, Console            Operating voltage: 19 to 60VDC            Operating temperature: -40 to +70°C (-40 to +158°F)</p>
<p><b>DDW-225</b> 3642-0250</p> <p><b>DDW-225-EX</b> 3642-5250</p> 	<p><b>Redundant Ring Ethernet Extender</b>            4 x 10/100 Mbit/s, Ethernet TX, RJ-45            2 x 32 kbit/s to 15.3 Mbit/s, SHDSL, 2-position detachable screw terminal            1 x Digital I/O, 4-position detachable screw terminal            1 x 2.5 mm jack, Console            Operating voltage: 16 to 60VDC            Operating temperature: -40 to +70°C (-40 to +158°F)</p>
<p><b>DDW-226</b> 3642-0240</p> <p><b>DDW-226-EX</b> 3642-5240</p> 	<p><b>Ethernet extender with serial support</b>            4 x 10/100 Mbit/s, Ethernet TX, RJ-45            1 x 300 bit/s to 115.2 kbit/s, RS-232, 9-pin D-sub (male)            2 x 32 kbit/s to 15.3 Mbit/s, SHDSL 2-position detachable screw terminal            1 x Digital I/O, 4-position detachable screw terminal            1 x USB 1 x 2.5 mm jack, Console            Operating voltage: 16 to 60VDC            Operating temperature: -40 to +70°C (-40 to +158°F)</p>

# Routers

- *Serial/PSTN Routers*
- *Wireless Routers*
- *Broadband DSL Routers*



*Westermo provide a whole range of routers for use in demanding applications such as railways, water treatment, substation automation, roads and tunnels. Offering remote access solutions using ADSL or VDSL broadband and wireless 3G (UMTS, HSDPA, HSUPA) or GPRS technologies, Westermo ensures connections to our customers remote sites are resilient and reliable.*

*As we know security is of paramount concern, all Westermo industrial routers include a powerful firewall to prevent unauthorised access.*

*Multiple media solutions  
for accessing  
remote networks*






## Serial/PSTN Routers

Product/Art. no	Description
<b>ED-200</b> 3609-5010 	<b>Ethernet Router</b> 4 x 10/100 Mbit/s, Ethernet TX, RJ-45 1 x 300 bit/s to 115.2 kbit/s, RS-232, 9-pin D-sub (male) 1 x 300 bit/s to 115.2 kbit/s, RS-422/485 4-position detachable screw terminal Operating voltage: 16 to 60 VDC Operating temperature: -25 to +65°C (-13 to +149°F)
<b>ED-210</b> 3609-5001 	<b>Ethernet Router</b> 4 x 10 Mbit/s, 100 Mbit/s, Ethernet TX, RJ-45 1 x 600 bit/s to 33.6 kbit/s, 2 position detachable screw terminal, Leased Line (LL) 1 x 600 bit/s to 33.6 kbit/s, PSTN, RJ-11C Operating voltage: 10 to 60 VDC Operating temperature: -25 to +65°C (-13 to +149°F)

## Wireless Routers



Product/Art. no	Description
<b>MRD-310</b> 3623-0001 	<b>Industrial mobile broadband/3G router</b> GSM/GPRS/EDGE/3G/HSPA 2 x 10 Mbit/s or 100 Mbit/s, Ethernet TX, RJ-45 1 x 300 bit/s to 115.2 kbit/s, RS-232, D-sub 1 x SIM slot Operating voltage: 10 to 60 VDC Operating temperature: -30 to +70°C (-22 to +158°F)
<b>MRD-315</b> 3623-0050 	<b>Industrial 3G router</b> GSM/GPRS/EDGE/3G/HSPA 2 x 10 Mbit/s or 100 Mbit/s, Ethernet TX, RJ-45 1 x 300 bit/s to 115.2 kbit/s, RS-232, D-sub 1 x SIM slot Operating voltage: 10 to 60 VDC Operating temperature: -40 to +70°C (-40 to +158°F)
<b>MRD-330</b> 3623-0101 	<b>Industrial mobile broadband/3G router</b> GSM/GPRS/EDGE/3G/HSPA 2 x 10 Mbit/s or 100 Mbit/s, Ethernet TX, RJ-45 3 x 300 bit/s to 115.2 kbit/s, RS-232, D-sub 2 x Digital Input, 2 x Digital Output 1 x SIM slot Operating voltage: 10 to 60 VDC Operating temperature: -30 to +70°C (-22 to +158°F)
<b>MRD-350</b> 3623-0201 	<b>Industrial mobile broadband/3G router</b> GSM/GPRS/EDGE/3G/HSPA 2 x 10 Mbit/s or 100 Mbit/s, Ethernet TX, RJ-45 1 x 300 bit/s to 115.2 kbit/s, RS-232, D-sub 2 x SIM slots Operating voltage: 10 to 60 VDC Operating temperature: -30 to +70°C (-22 to +158°F)
<b>MRD-355</b> 3623-0250 	<b>Industrial mobile broadband/3G router</b> GSM/GPRS/EDGE/3G/HSPA 2 x 10 Mbit/s or 100 Mbit/s, Ethernet TX, RJ-45 1 x 300 bit/s to 115.2 kbit/s, RS-232, D-sub 2 x SIM slot Operating voltage: 10 to 60 VDC Operating temperature: -40 to +70°C (-40 to +158°F)

Product/Art. no	Description
<b>MRD-455</b> 3623-0401 	<b>Industrial mobile broadband/4G router</b> GSM/GPRS/EDGE/3G/HSPA/4G LTE 2 x 10 Mbit/s or 100 Mbit/s, Ethernet TX, RJ-45 1 x 300 bit/s to 115.2 kbit/s, RS-232, D-sub 2 x SIM slot Operating voltage: 10 to 60VDC Operating temperature: -40 to +70°C (-40 to +158°F)
<b>MR-210</b> 3622-0201 	<b>Mobile broadband router</b> 1 x 10 Mbit/s or 100 Mbit/s, Ethernet TX, RJ-45 1 x 300 bit/s to 115.2 kbit/s, RS-232, D-sub 2 x SIM slots 1 x USB Operating voltage: 9 to 48VDC Operating temperature: -20 to +60°C (-4 to +140°F).
<b>MR-260</b> 3622-0202 	<b>Mobile broadband router</b> 1 x 10 Mbit/s or 100 Mbit/s, Ethernet TX, RJ-45 1 x 300 bit/s to 115.2 kbit/s, RS-232, D-sub 2 x SIM slots 1 x USB Operating voltage: 9 to 48VDC Operating temperature: -20 to +55°C (-4 to +131°F).
<b>MR-270</b> 3622-0205 	<b>Mobile broadband router</b> 4 x 10 Mbit/s or 100 Mbit/s, Ethernet TX, RJ-45 1 x 300 bit/s to 115.2 kbit/s, RS-232, D-sub 2 x SIM slots 1 x USB Operating voltage: 11 to 58VDC Operating temperature: 0 to +55°C (32 to +131°F).



# Broadband DSL Routers



Product/Art. no	Description
<b>FDV-206-1D-1S</b> 3660-0100 	<b>Industrial Broadband Router</b> 4 x 10 Mbit/s or 100 Mbit/s, Ethernet TX, RJ-45 1 x 50 bit/s to 115.2 kbit/s, RS-232, RJ-45 1 x ADSL, ADSL2/ASDL2+/VDSL2, RJ-11 1 x USB 1 x Digital I/O 1 x 2.5 mm jack, console Operating voltage: 19 to 60 VDC Operating temperature: -20 to +70°C (-4 to +158°F).
<b>ADSL-350</b> 3623-0301 	<b>Industrial ADSL Router</b> 2 x 10 Mbit/s or 100 Mbit/s, Ethernet TX, RJ-45 1 x 300 bit/s to 115.2 kbit/s, RS-232, DB-9 1 x ADSL, ADSL2/ASDL2+, RJ-11 2 x SIM 1 x USB Operating voltage: 10 to 60 VDC Operating temperature: -25 to +70°C (-13 to +158°F).
<b>DR-270</b> 3622-xxxx 	<b>Multiple media ADSL/VDSL2 router</b> 4 x 10 Mbit/s or 100 Mbit/s, Ethernet TX, RJ-45 1 x 300 bit/s to 115.2 kbit/s, RS-232, DB-9 1 x ADSL/ADSL2/ADSL2+/ADSL2++/VDSL2, RJ-11 2 x SIM 1 x USB Operating voltage: 9 to 36 VDC Operating temperature: DR-270, DR-270 + 3G: -40 to +75°C (-40 to +167°F) DR-270 + WiFi, DR-270 + WiFi + 3G.: -20 to +75 °C (-4 to +131°F).
3622-0310	Multiple media ADSL/VDSL2 router DR-270A
3622-0315	Multiple media ADSL/VDSL2 router DR-270A + WiFi
3622-0320	Multiple media ADSL/VDSL2 router DR-270A + 3G
3622-0325	Multiple media ADSL/VDSL2 router DR-270A + 3G + WiFi
3622-0340	Multiple media ADSL/VDSL2 router DR-270B
3622-0345	Multiple media ADSL/VDSL2 router DR-270B + WiFi
3622-0350	Multiple media ADSL/VDSL2 router DR-270B + 3G
3622-0355	Multiple media ADSL/VDSL2 router DR-270B + 3G + WiFi
4200-3006	Optional VPN tunnel extension upgrade; additional 50 Tunnels
4200-3010	Optional VPN tunnel extension upgrade; additional 100 Tunnels



# Westermo Delivers Robust Industrial Networks

The traditional Westermo values of robustness and reliability in hardware design are now complemented by the WeOS network software solution. Over the last few years, Westermo has worked to develop this market leading software solution that operates on a range of Westermo's most robust hardware platforms.

## **Robustness**

Westermo hardware is designed and externally verified to work in the harshest industrial environments over a long service life.

## **Cyber Security**

With virtually every network today somehow connected to the Internet, WeOS can deliver firewall functionality to every port on the network.

## **Resilience**

Westermo networks are mission critical and designed to operate even when there are media or power failures on parts of the system.

## **Multimedia Support**

Fibre, UTP, RS-232, RS-485, VDSL2, ADSL and any twisted pair cable are all supported within the WeOS family of products.

## **Network Application Support**

Industrial protocols come in many different formats; however, Westermo's expertise and WeOS legacy serial support allows simple migration to IP technology.

## **Production Quality**

All WeOS products are manufactured at our own facility in Sweden to the highest quality standards.



Visit our website  
for more information  
[www.westermo.com](http://www.westermo.com)

# Modems

- *Fibre Optic Modems*
- *GSM/GPRS Modems*
- *ISDN Modems*
- *Leased Line/PSTN Modems*
- *Short Haul Modems*
- *Multidrop Modems*

*Whether the need is to communicate through a PSTN or ISDN line, across a private wire or leased line, down a fibre optic cable, or even over GSM/GPRS, Westermo have a solution.*

*Our wide range of industrial modems is designed for use in such demanding applications as railways, water treatment, substation automation, roads and tunnels. All Westermo modems exceed industrial standards and ensure robust and reliable communications.*



*Industrial  
data modems  
for the harshest  
environments*





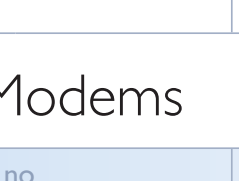

# Fibre Optic Modems

RS-232/RS-485		
Product/Art. no		Description
<b>ODW-720-F1</b> 3651-0721  <b>ODW-720-F1 EX</b> 3651-3721		<b>Point-to-point fibre converter, RS-232</b> 1 x Pluggable transceivers, SFP 1 x 300 bit/s to 250 kbit/s, RS-232, D-sub 1 x Detachable screw terminal, Status Operating voltage: 10 to 60 VDC or 20 to 30 VAC Operating temperature: -40 to +70°C (-40 to +158°F)
<b>ODW-720-F2</b> 3651-0722  <b>ODW-720-F2 EX</b> 3651-3722		<b>Ring/multidrop fibre converter, RS-232</b> 2 x Pluggable transceivers, SFP 1 x 300 bit/s to 250 kbit/s, RS-232, D-sub 1 x Detachable screw terminal, Status Operating voltage: 10 to 60 VDC or 20 to 30 VAC Operating temperature: -40 to +60°C (-40 to +140°F)
<b>ODW-730-F1</b> 3651-0731  <b>ODW-730-F1 EX</b> 3651-3731		<b>Point-to-point fibre converter, RS-422/485</b> 1 x Pluggable transceivers, SFP 1 x 300 bit/s to 1.5 Mbit/s, RS-422/485, D-sub 1 x Detachable screw terminal, Status Operating voltage: 10 to 60 VDC or 20 to 30 VAC Operating temperature: -40 to +70°C (-40 to +158°F)
<b>ODW-730-F2</b> 3651-0732  <b>ODW-730-F2 EX</b> 3651-3732		<b>Ring/multidrop fibre converter, RS-422/485</b> 2 x Pluggable transceivers, SFP 1 x 300 bit/s to 1.5 Mbit/s RS-422/485, D-sub., 1 x Detachable screw terminal, Status Operating voltage: 10 to 60 VDC or 20 to 30 VAC Operating temperature: -40 to +60°C (-40 to +140°F)
PROFIBUS		
Product/Art. no		Description
<b>ODW-710-F1</b> 3651-0711  <b>ODW-710-F1 EX</b> 3651-3711		<b>Point-to-point fibre converter, PROFIBUS</b> 1 x Pluggable transceivers, SFP 1 x 9 600 bit/s to 12 Mbit/s, PROFIBUS DP (RS-485), D-sub 1 x Detachable screw terminal, Status Operating voltage: 10 to 60 VDC or 20 to 30 VAC Operating temperature: -40 to +70°C (-40 to +158°F)
<b>ODW-710-F2</b> 3651-0712  <b>ODW-710-F2 EX</b> 3651-3712		<b>Ring/multidrop fibre converter, PROFIBUS</b> 2 x Pluggable transceivers, SFP 1 x 9 600 bit/s to 12 Mbit/s, PROFIBUS DP (RS-485), D-sub 1 x Detachable screw terminal, Status Operating voltage: 10 to 60 VDC or 20 to 30 VAC Operating temperature: -40 to +60°C (-40 to +140°F)




LONWORKS®	
Product/Art. no	Description
<b>LRW-102 PP</b> 3650-xxxx 	<b>Fibre optic LON repeater for TP/FT-10, point-to-point</b> 1 x pluggable transceivers, SFP 1 x 78.5 kbit/s, TP/FT-10, detachable screw terminal 1 x Detachable screw terminal, Status Operating voltage: 10 to 60VDC or 20 to 30VAC Operating temperature: -40 to +60°C (-40 to +140°F)
<b>LRW-102</b> 3650-xxxx 	<b>Fibre optic LON repeater for TP/FT-10, multidrop and redundant ring</b> 2 x pluggable transceivers, SFP 1 x 78.5 kbit/s, TP/FT-10, detachable screw terminal 1 x Detachable screw terminal, Status Operating voltage: 10 to 60VDC or 20 to 30VAC Operating temperature: -40 to +60°C (-40 to +140°F)

## GSM/GPRS Modems

Product/Art. no	Description
<b>GDW-11</b> 3615-0001 	<b>GSM modem, GSM/GPRS</b> 1 x 300 bit/s to 115.2 kbit/s, RS-232 1 x SIM slot Operating voltage: 10 to 60VDC Operating temperature: -25 to +50°C (-13 to +122°F)
<b>GDW-11 EX</b> 3615-5001 	<b>GSM modem, GSM/GPRS</b> 1 x 300 bit/s to 115.2 kbit/s, RS-232 1 x 1200 bit/s to 115.2 kbit/s, RS-422/485 1 x SIM slot Operating voltage: 10 to 60VDC Operating temperature: -25 to +50°C (-13 to +122°F)
<b>GDW-11 485</b> 3615-0030 	<b>GSM modem, GSM/GPRS</b> 1 x 300 bit/s to 115.2 kbit/s, RS-232 1 x 1200 bit/s to 115.2 kbit/s, RS-422/485 1 x SIM slot Operating voltage: 10 to 60VDC Operating temperature: -25 to +50°C (-13 to +122°F)
<b>GDW-11 485 EX</b> 3615-5030 	<b>GSM modem, GSM/GPRS</b> 1 x 300 bit/s to 115.2 kbit/s, RS-232 1 x 1200 bit/s to 115.2 kbit/s, RS-422/485 1 x SIM slot Operating voltage: 10 to 60VDC Operating temperature: -25 to +50°C (-13 to +122°F)


## ISDN Modems

Product/Art. no	Description
<b>IDW-90</b> 3620-0001 	<b>Industrial ISDN Modem</b> 1 x 300 bit/s to 115.2 kbit/s, RS-232 1 x 300 bit/s to 115.2 kbit/s, RS-422/485 1 x 300 bit/s to 128.0 kbit/s, ISDN 1 x Digital I/O Operating voltage: 10 to 60VDC, 10 to 42VAC Operating temperature: +5 to +55°C (41 to +131°F)


# PSTN/Leased Line Modems

PSTN		
Product/Art. no		Description
TDW-33 3619-0001		<b>Industrial Telephone Modem</b> 1 x 300 bit/s to 115.2 kbit/s, RS-232 1 x 300 bit/s to 56.7 kbit/s, Public Switched Telephone Network (PSTN) Operating voltage: 10 to 60 VDC or 10 to 42 VAC Operating temperature: -25 to +70°C (-13 to +158°F)
TD-36 3618-xxxx		<b>Industrial PSTN and Leased Line Modem</b> 1 x 300 bit/s to 115.2 kbit/s, RS-232 1 x 300 bit/s to 33.6 kbit/s, Leased Line (LL) 1 x 300 bit/s to 56.7 kbit/s, Public Switched Telephone Network (PSTN) Operating voltage: AV: 18 to 300 VDC, 22 to 264 VAC LV: 12 to 48 VDC, 12 to 27 VAC Operating temperature: -25 to +70°C (-13 to +158°F)
TD-36 485 3618-xxxx		<b>Industrial backup PSTN and Leased Line Modem</b> 1 x 300 bit/s to 115.2 kbit/s, RS-232 1 x 300 bit/s to 115.2 kbit/s, RS-422/485 1 x 300 bit/s to 33.6 kbit/s, Leased Line (LL) 1 x 300 bit/s to 56.7 kbit/s, Public Switched Telephone Network (PSTN) Operating voltage: AV: 18 to 300 VDC, 22 to 264 VAC LV: 12 to 48 VDC, 12 to 27 VAC Operating temperature: -25 to +70°C (-13 to +158°F)
TR-36B 3614-0510		<b>Industrial Rack Modem</b> Connected to rack RV-07B, see below Operating voltage: 10 to 60 VDC Operating temperature: -40 to +70°C (-40 to +158°F)
RV-07B 3130-3010		<b>19" rack for TR-36B telephone and Leased Line modem</b> 1 x 300 bit/s to 115.2 kbit/s, RS-232 1 x 300 bit/s to 115.2 kbit/s, RS-422/485 1 x 300 bit/s to 33.6 kbit/s, Leased Line (LL) 1 x 300 bit/s to 56.7 kbit/s, Public Switched Telephone Network (PSTN) 1 x Alarm Output Up to 16 x TR-36B's and 2 x PSU Operating voltage: LV: 10 to 60 VDC 10 to 30 VAC HV: 48 to 300 VDC, 85.5 to 264 VAC Operating temperature: -40 to +70°C (-40 to +158°F)
Leased Line		
Product/Art. no		Description
TD-23 3600-xxxx		<b>Multidrop modem</b> 1 x 300 bit/s to 115.2 kbit/s, RS-232 1 x 300 bit/s to 115.2 kbit/s, RS-422/485 1 x 300 bit/s to 33.6 kbit/s, Leased Line (LL) 1 x Detachable screw terminal, Relay (optional). Operating voltage: LV: 10 to 60 VDC 10 to 30 VAC HV: 48 to 300 VDC, 85.5 to 264 VAC Operating temperature: -25 to +70°C (-13 to +158°F)
TD-29 3611-xxxx		<b>Multidrop FSK-modem</b> 1 x 2400 bit/s to 192 kbit/s, RS-232 1 x 2400 bit/s to 192 kbit/s, RS-422/485 1 x 2400 bit/s to 192 kbit/s, FSK-Line Operating voltage: DC: 12 - 36 VDC and 36 - 55 VDC Operating temperature: +5 to +50°C (+41 to +122°F)

## Short Haul Modems

RS-232, point-to-point	
Product/Art. no	Description
<b>MD-12</b> 3150-xxxx 	<b>Short-haul modem, point-to-point</b> 1 x Up to 38.4 kbit/s, RS-232, D-sub 1 x Up to 38.4 kbit/s, RS-232, detachable screw terminal 1 x ±10 mA balanced current loop, detachable screw terminal, Line connection Operating voltage: 12 to 36 VDC Operating temperature: +5 to +50°C (+41 to +122°F) -40 to +70°C (-40 to +158°F)

## Multidrop Modems

RS-232, multidrop	
Product/Art. no	Description
<b>LD-02</b> 3156-xxxx 	<b>Line sharing modem</b> 1 x D-sub, up to 38.4 kbit/s, RS-232 1 x Up to 38.4 kbit/s, RS-232, detachable screw terminal 1 x Up to 38.4 kbit/s, RS-422/485, detachable screw terminal 1 x ±10 mA balanced current loop, detachable screw terminal, line connection Operating voltage: 12 to 36 VDC or 36 to 55 VDC or 207 to 264 VAC or 103 to 132 VAC Operating temperature: +5 to +50°C (+41 to +122°F)

# Converters

- *Serial Converters/Repeaters*
- *Current Loop Converters*
- *Ethernet Media Converters*
- *Protocol Converters*

*Westermo can supply a range of converters and repeaters to suit a whole host of industrial protocols and communication methods, including Ethernet, RS-232, RS-422, RS-485, PROFIBUS DP, M-Bus and 20 mA current loop.*

*Whether a fibre media converter for an Ethernet link, a serial converter, or a repeater for an RS-485 network is needed, rest assured that Westermo have a solution which will operate in the harshest industrial environments and provide robust, reliable communications for peace of mind.*


*Industrial converters  
for industrial  
protocols*



## Serial Converters/Repeaters


Product/Art. no	Description
<b>EDW-100</b> 3616-0020  <b>EDW-100 EX</b> 3616-5020	<b>Serial Adapter</b> 1 x 10/100 Mbit/s, Ethernet TX, RJ-45 1 x 300 bit/s to 115.2 kbit/s, RS-232, D-sub 1 x 2400 bit/s to 192 kbit/s, RS-422/485, detachable screw terminal Operating voltage: 10 to 60 VDC Operating temperature: -25 to +70°C (-13 to +158°F).
<b>EDW-120</b> 3616-0010  <b>EDW-120 EX</b> 3616-5010	<b>Serial Adapter</b> 1 x 10/100 Mbit/s, Ethernet TX, RJ-45 2 x 300 bit/s to 115.2 kbit/s, RS-232, D-sub Operating voltage: 10 to 60 VDC Operating temperature: -25 to +70°C (-13 to +158°F).
<b>RD-48</b> 3153-xxxx 	<b>RS-422/485 Repeater</b> 2 x 300 bit/s to 1.5 Mbit/s, RS-422/485 detachable screw terminal Operating voltage: LV: 96 to 57.6 VDC HV: 85.5 to 264 VAC or 88 to 300 VDC Operating temperature: -40 to +70°C (-40 to 158°F)
<b>MDW-45</b> 3617-0xxx  <b>MDW-45 EX</b> 3617-5xxx	<b>RS-422/485 Converter</b> 1 x 1200 bit/s to 115.2 kbit/s, RS-232, D-sub 1 x 300 bit/s to 1.5 Mbit/s, RS-422/485, detachable screw terminal Operating voltage: LV: 96 to 57.6 VDC HV: 85.5 to 264 VAC or 88 to 300 VDC Operating temperature: -40 to +70°C (-40 to 158°F)

## Current Loop Converters




Product/Art. no	Description
<b>MD-21</b> 3151-xxxx 	<b>20 mA Current loop converter</b> 1 x Up to 192 kbit/s, RS-232, D-sub or detachable screw terminal 1 x Up to 192 kbit/s, 20 mA current loop, detachable screw terminal Operating voltage: AC: 207 to 264 VAC, 103 to 132 VAC DC: 12 to 36 VDC, 36 to 55 VDC Operating temperature: +5 to +50°C (+41 to 122°F)




# Ethernet Media Converters

Product/Art. no	Description
<b>MCW-211</b> 3645-0xxx  <b>MCW-211 EX</b> 3645-5xxx 	<b>Industrial Ethernet Media Converter</b> 1 x 10/100 Mbit/s, Ethernet TX 1 x 100 Mbit/s, Ethernet FX Operating voltage: 12 to 48 VDC Operating temperature: -40 to +70°C (-40 to +158°F).

## i-line

Product/Art. no	Description
<b>MCI-211G</b> 3624-0001 	<b>Gigabit Ethernet Media Converter</b> 1 x 10/100/1000 Mbit/s, Ethernet TX, RJ-45 1 x 1000 Mbit/s, pluggable transceivers, SFP Operating voltage: 12 to 48 VDC Operating temperature: -25 to +70°C (-13 to +158°F).
<b>MCI-422-MM-SC2</b> 3624-0100 	<b>2-channel Ethernet to Fibre Media Converter</b> 2 x 10/100 Mbit/s, Ethernet TX, RJ-45 2 x 100 Mbit/s Fibre port, Multi-mode 2 km, SC connector Operating voltage: 10 to 60 VDC Operating temperature: -40 to +75°C (-40 to +167°F).
<b>MCI-422-SM-SC30</b> 3624-0110 	<b>2-channel Ethernet to Fibre Media Converter</b> 2 x 10/100 Mbit/s, Ethernet TX, RJ-45 2 x 100 Mbit/s Fibre port, Single-mode 30 km, SC connector Operating voltage: 10 to 60 VDC Operating temperature: -40 to +75°C (-40 to +167°F).

# Protocol Converters

M-Bus Converter	
<b>AD-01</b> 3612-0001 	<b>M-Bus adapter</b> 1 x Up to 9600 bit/s, RS-232, D-sub or detachable screw terminals 2 x Up to 9600 bit/s, RS-232, detachable screw terminals 2 x Up to 9600 bit/s, Detachable screw terminals, M-Bus slave Operating voltage: 207 to 253 VAC Operating temperature: 0 to +50°C (32 to +122°F).

# Accessories

- *Optical transceivers*
- *Power supplies*
- *Cables and antennas*

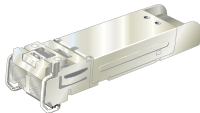
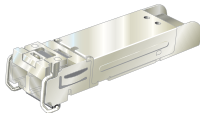
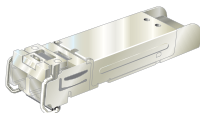
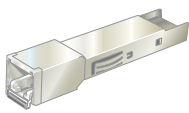
*As well as industrial data communications devices, Westermo can also supply a range of vital accessories to provide a complete solution. Whether the application requires an industrial rated power supply, optical transceivers for use with our many fibre optic devices, or cables and antennas for a wireless application, Westermo has it covered.*

*Applying the  
final touch to  
industrial applications*



# Transceivers

Westermo offer a wide selection of Small Form Pluggable (SFP) transceivers. The selection of transceivers are available in a variety of models and lengths offering transmission ranges from 2 km to 120 km (1.2 mi to 74.5 mi) over fibre. The CX transceiver allows SFP ports to be used to connect an Ethernet RJ-45 cable. Contact Westermo for detailed information.

Product	Description
<b>Single Mode Transceivers</b> 	Single Mode Transceivers are available in a variety of models. Transmission capacity from 100 Mbit to 1 Gbit and distances from 15 to 120 km (93 to 74.5 mi)..
<b>Multi Mode Transceivers</b> 	Multi Mode Transceivers are available in a variety of models. Transmission capacity from 100 Mbit to 1 Gbit and distances from 550 m to 60 km (1805 ft to 37.2 mi)..
<b>Bi-directional Transceivers</b> 	Bi-Di Transceivers are available in a variety of models. 100 Mbit transmission capacity and distances from 2 km to 60 km. (1.2 mi to 37.2 mi).
<b>CX Transceiver</b> 	CX transceivers link a SFP port to a copper-based network, using a standard RJ-45 connection 1 Gbit transmission capacity and 100 m (328 ft) distance..

# Power Supplies/Adapters


Westermo provides a set of industrially approved power supplies complying with many mayor safety approvals. The most common power supplies, PS-30 and PS-100, come in a DIN-mounted housing and can operate in a extended temperature range.

Product/Art. no	Description
<b>PS-20 HV</b> 3120-3101 	<b>Power supply for RV-07B</b> Rated voltage: 100 to 240 VAC Operating voltage: 90 to 254 VAC
<b>PS-30</b> 3125-0001 	<b>Power supply, DIN-rail</b> Output: DC 24 to 28V/30 W PSU Input: 85 to 264 VAC, 85 to 375 VDC
<b>PS-100/48</b> 3125-0050 	<b>Power supply DIN-rail, PoE Ready PSU</b> Output voltage: 48 to 56 VDC *preset to: 48 V $\pm$ 0.5% @ 2.1 A Input: AC 100 to 120/220 to 240 V (Auto Select), 47 to 63 Hz (AC 85 to 132 V/AC 184 to 264 V, DC 220 to 375 V)

# Backup Device

The USB-M12 is a configuration backup device designed to meet the full requirements of the rail vehicle market.

This device can be used with the Viper 212, Viper 112 and RFR-12-FB, and allows the configuration of the switch to be saved. The device can then be left attached to the switch for easy maintenance exchange of units. Alternatively, the device allows configurations to be updated by simply plugging it in to the unit and repowering.

Product/Art. no	Description
<b>USB M12 plug</b> <b>IP65</b> 3641-0190 	Electrical specification: USB v1.1 Data rate: Up to 480Mbit/s Connection: M12 A-coded male Memory size: 16 Mbyte.

# Cables

Special cables for reading diagnostics, antennas, radio, fibre and Ethernet are available in a variety of lengths and jacketing options. Please contact Westermo for further information.

Product/Art. no	Description
<b>Diagnostic cable</b> 1211-2026 	Cable for diagnostic DDW-100 DDW-100 to RS-232
<b>Diagnostic cable</b> 1211-2027 	Cable for diagnostic DDW-120 and RedFox Console port to USB
<b>M12 cables</b> 	M12 - M12 In length, 1 m, 5 m and 15 m (3.28 ft, 16.40 ft and 49.21 ft)
<b>M12-RJ45 cables</b> 	M12 - RJ-45 In length, 1 m, 5 m and 15 m (3.28 ft, 16.40 ft and 49.21 ft)
<b>Power cables</b> 	M12 In length, 1.5 m and 5 m (4.92 ft and 16.40 ft)
<b>GSM cables</b> TZC SMA/F-SMA/M 	Cables for antennas In length, 3 m, 5 m and 10 m (9.84 ft, 16.40 ft and 32.80 ft)
<b>Radio cables</b> RG213 	Cables for antennas In length, 3 m, 5 m, 7 m, 10 m and 15 m (9.84 ft, 22.96 ft, 16.40 ft, 32.80 ft and 49.21 ft)



# Antennas/Adapters

Special antennas for radio and GSM are available in a variety of models. Please contact Westermo for further information.

Product/Art. no	Description
CA-930D CA-860D 	DIPOLE, 4 dBi 890 -960 MHz
CA-930Y-series CA-860Y-series 	YAGI, 6 dBi, 8 dBi and 10 dBi, 890 -960 MHz YAGI, 6 dBi, 8 dBi and 10 dBi, 830 -890 MHz
EX07 	Whip antenna with magnetic foot, 900/1800 MHz
GS-23/M70EXR 	Low profile antenna
CA-860Q 	Whip antenna with SMA connector; 830 -890 MHz
CA-2400M 	Corner reflector antenna 2.4 GHz, N-connector



# Westermo Quality and Approvals

Westermo design and manufacture robust data communication devices for harsh environments. We supply products that provide the communication infrastructure for control and monitoring systems, derived from proven commercial technology. These products are used in mission critical solutions, where commercial grade products are not sufficiently resilient.

To ensure the highest quality products, Westermo has a state of the art industrial electronics manufacturing facility in Sweden. To maximise the reliability of the product, testing is carried out at many stages of the manufacturing process.

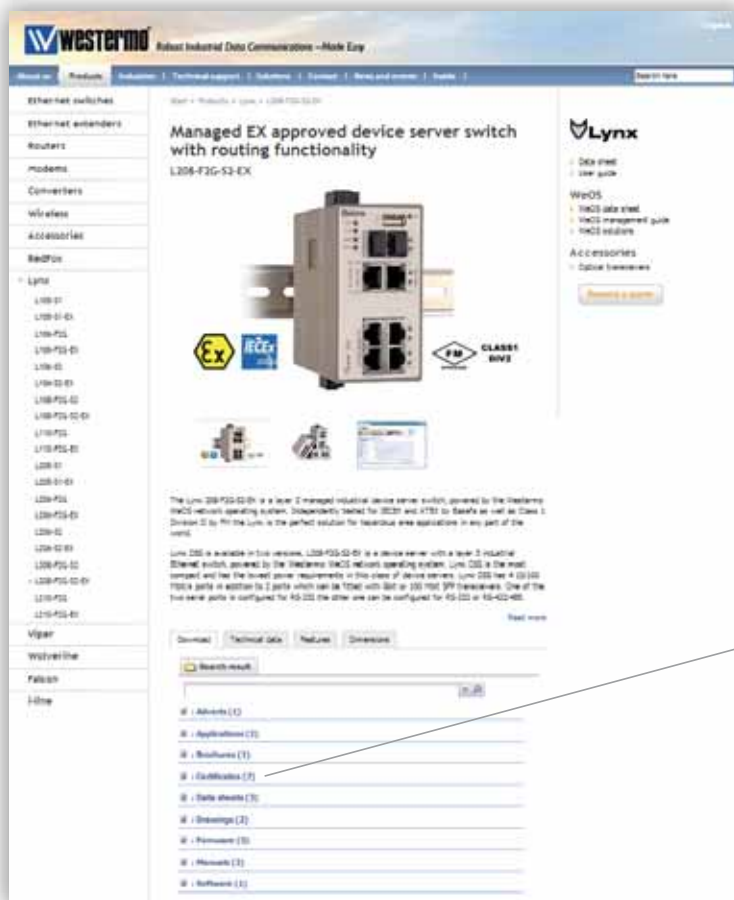
- ⌘ *Manufacturing to IPC-A-610 under ISO9001-2008 QMS*
- ⌘ *Solder Paste Inspection and Automated Optical Inspection*
- ⌘ *X-ray examination and PCB testing*
- ⌘ *Functional testing*
- ⌘ *Burn-in testing to EN-50155*

<b>EN 61000-6-1</b>	<b>EN 61000-6-2</b>	<b>EN 61000-6-3</b>	<b>EN 61000-6-4</b>	<b>EN 50121-4</b>	<b>EN 50155</b>	<b>EN 55022</b>	<b>EN 55024</b>					
Residential Immunity	Industrial Immunity	Residential Emission	Industrial Emission	Railway Trackside	On Board Rail	ITE Emission	ITE Immunity					

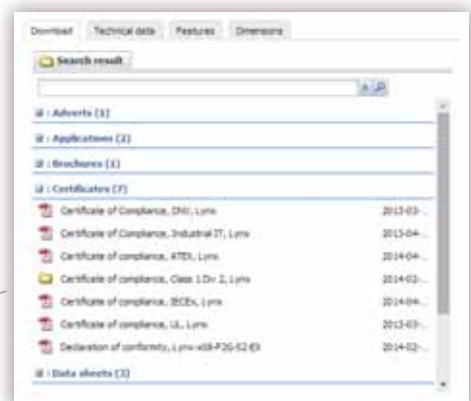


# Visit our website for the latest information on approvals

We are constantly working to certify our products for use in various industrial environments. New approvals and certifications are added all the time, please visit our website for the latest information, [www.westermo.com](http://www.westermo.com)



- ⌘ A brief overview on product approvals can be found on each data sheet
- ⌘ Detailed information about product approvals can be found in the User Guide and in the Technical Data section on the website
- ⌘ For some industry-specific approvals, the complete supported product range can be overviewed in the Industries section



All product certificates are found in the downloads tab on the website



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Westermo Data Communications

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### Germany

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### Other Offices



*For complete contact information, please visit our website at  
[www.westermo.com/contact](http://www.westermo.com/contact) or scan the QR code.*

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