

Data communication – not just cables and connectors

Industrial data communication

The industrial IT revolution

Competitive advantages can be achieved through creating new and efficient information channels in a company's processes. Shorter delivery times, faster product development, customer-focused production and shorter changeover times, are just a few of the key expressions pertaining to the industrial IT wave. Like fast access to information and the possibility to control the processes. Industry develops IT tools that require increased integration in all parts of a process, from purchasing to production and marketing. The quality of information paths and information flows is today one of the most important conditions for increased efficiency and competitiveness for industry.

Different standards

New ideas, new systems and new solutions to create these IT-tools are emerging. A negative consequence of this dynamic and all diversity is that for some time there has been a lack of accepted standards, despite many attempts. Each developer has created his own solution. The problem of inadequate standards is discovered when computers, machines and equipment need to communicate. It is a question of standards on many levels, not just for cables and connectors. It is about the manner in which data is created, saved, compressed, addressed and sent, how the medium (for example, a cable) carries, receives and decompresses the information and how it is read by the receiver. When all this works we have effected data communication. The prerequisite for industry's IT development.

Industrial data communication

The largest steps within the standardisation of data communication have taken place on the office side in the integrated network for personal computers, mainframes, printers, servers, telecom modems, etc. Local data communication within industry has not come into focus so much, this is due to the lack of standards and that diversity is even greater as the communication should take place between, e.g. computers, lathes, measurement equipment, scales, robots, transport systems and different alarm systems. Demands are greater on operating reliability and insensitivity to interference. This is the reason behind this book, to bring some clarity to expressions, explain how it works and to be a practical guide in solving problems within industrial data communication. If you would like to know more please do not hesitate to contact Westermo.

What is industrial data communication to us?

No downtime

All equipment must be designed so that communication interference and downtime are eliminated. We achieve this by using high quality components, for example, capacitors with a long life and through validating designs in environments exposed to interference.

No maintenance

Our products are developed to withstand the harshest of environments without maintenance or service. In addition to the robust design, they never contain components that need to be replaced such as batteries.

Harsh environments

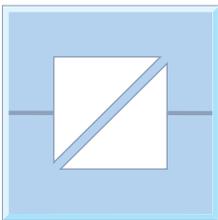
Industrial equipment is normally installed together with or in the vicinity of other equipment that generates interference, for example, welding equipment or heavy machines. We have more than 30 years of experience in designing communication equipment for industry and we use this know how in the development of industrial equipment.

Extended temperature range

An extended temperature range is frequently required in industrial applications. We guarantee functionality through the use of high quality components with an extended temperature range, this applies to hardware such as connectors.

Mechanical performance

In industrial applications equipment is often mounted on machines that move or vibrate. All our products are designed to withstand high mechanical stresses. As important as mechanical reliability is the mounting method, consequently our range comprises products for rack and DIN-mounting as well as table top or mini modem models.

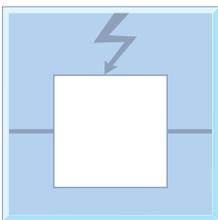


Galvanic isolation

One of the most common causes of communication errors is the problem with potential differences between interconnected equipment. This is eliminated with galvanic isolation of the interface, this is one of the basic functions in our products.

Transient suppression

Industrial equipment is often exposed to interference generated by, e.g. high power cables, reactive loads and different forms of transients. Products from Westermo are designed to withstand these types of interference.



Power supply

It is important to have a reliable power source in industrial equipment, so a DC supply is frequently used together with accumulators to eliminate downtime. When you charge an accumulator a higher voltage than the battery voltage is used, therefore all equipment must be designed for these conditions. Sometimes it is also important to use a redundant power supply for twofold reliability, which many of our products have.

Determinism

When using equipment in real time applications it is important to have different degrees of prioritisation. Our range of switches feature integrated functions and queues that guarantee the transfer of prioritised data.

Approval

Our equipment is installed in different applications throughout the world. In order to conform to local safety requirements, requirements governing electrical immunity/emissions and mechanics, we design and produce based on international standards and requirements.

Westerno Teleindustri AB			
Declaration of conformity			
The manufacturer: Westerno Teleindustri AB SE-640 40 Södra Sandby, Sweden			
Hereby declares that the product(s)			
Designation	Model	EC no.	Identification number
DIN-rail	SDW-50 LV	04440010	04442211
DIN-rail	SDW-502-MM-SC3-SM-SC12 LV	04440019	04442211
DIN-rail	SDW-501-MM-SC2 LV	04440020	04442211
DIN-rail	SDW-501-SM-SC12 LV	04440021	04442211
DIN-rail	SDW-501-SM-SC1 LV	04440022	04442211
DIN-rail	SDW-501-SM-SC15 LV	04440024	04442211
DIN-rail	SDW-502-2MM-SC1 LV	04440026	04442211
DIN-rail	SDW-502-2MM-SC15 LV	04440031	04442211
DIN-rail	SDW-502-2MM-SC12 LV	04440032	04442211
DIN-rail	SDW-502-2SM-SC1 LV	04440034	04442211

is in conformity with the following EC Directives:

EMC	2004/108/EC
Low Voltage	2006/95/EC
RoHS	2002/95/EC

