

NETWORK TECHNOLOGY

from Murrelektronik





Murrelektronik stands for first class, high quality cables. Every Murrelektronik connector is fully tested. Tests include:

- Electrical
- High voltage
- Function
- Pin connection
- Short circuit
- Visual inspection



EFFICIENT NETWORK INSTALLATIONS

As the worlds of machinery and system connectivity grow closer together, Ethernet based solutions are becoming more and more important. The shift from Profibus to Profinet entails an increase in the number of Ethernet components in machinery and systems. Murrelektronik's switches allow you to achieve more flexible, cost effective installations of your Ethernet components.

From basic functionality to a huge variety of functions

Murrelektronik offers an extensive portfolio of switches. Unmanaged switches reliably cover basic functions and offer good value for money, while versions like the PROFINET managed switch offer a maximum range of functions.

- Installation solutions are made easier thanks to the wiring flexibility provided by the switches
- Integrated web servers and simple connections to network analysis tools make status communication easy
- Our compact, IP67 rated switches allow you to shift the coupling layer to the field making your control cabinet smaller

FULL PORTFOLIO OF ETHERNET CONNECTORS

Murrelektronik specializes in cordsets. We offer a wide range for wiring Ethernet systems:

- Solutions for office environments (IP20 rated, RJ45) and industrial applications (IP67 rated, M12) and IP67 applications (M12)
- angled IP20 versions for space-saving installations
- a variety of premolded cables in lengths from .1 to 100m with a MOQ of one piece
- custom cable options add options to your installations
- 360° shielding for reliable data transfer

Another Plus: Murrelektronik's X-coded gigabit cables transfer up to 10 GBit/s

OVERVIEW

WHICH SWITCH IS RIGHT IN EACH CASE?

MANAGED SWITCHES

- comprehensive diagnostic options thanks to an integrated web server, network tools and automatic topology detection
- neighbor detection

PROFINET managed switches

- easy implementation via TIA portal with the help of a GSDML file
- on device replacement, automatic device integration via PROFINET baptism
- full switch integration as PROFINET device
- implementation of ring structures via MRP ring formation

Lite managed switches

- easy setup via the web server
- new devices are created in the web server via a configuration file
- prioritization of PROFINET telegrams
- Ethernet/IP-enabled



UNMANAGED SWITCHES

- No programming required. Just plug and play
- fastest setup
- easy device replacement
- inexpensive
- wide range of options
- prioritization of PROFINET telegrams to IEEE 802.3x
- Ethernet/IP-enabled



	MANAGED SWITCHES				UNMANAGED SWITCHES	
	Profinet managed switches		Lite managed switches			
	IP20 versions	IP67 versions	IP20 versions	IP67 versions	IP20 versions	IP67 versions
Redundant power supply	Yes	Yes	Yes	Yes	Yes, to some extent	Yes
Power supply M12 d-coded via IO port	No	Yes	No	Yes	No	Yes
RJ45	Yes	No	Yes	No	Yes	No
M12	No	Yes	No	Yes	No	Yes
4 ports	Yes	No	Yes	No	Yes	Yes
5 ports	No	Yes	No	Yes	No	No
6 ports	Yes	No	Yes	No	Yes	No
8 ports	No	No	No	No	Yes	Yes
16 ports	No	No	No	No	Yes	No
Gigabit	No	No	No	No	Yes	No
NAT	No	No	Yes	Yes	No	No
SNMP V1, V2 and V3	Yes	Yes	Yes	Yes	No	No
Secure remote access (open VPN)	Yes	Yes	Yes	Yes	No	No
Secure web server	Yes	Yes	Yes	Yes	No	No
NTP (Network Time Protocol)	Yes	Yes	Yes	Yes	No	No
LLDP neighborhood topology	Yes	Yes	Yes	Yes	No	No
LLDP PN neighborhood topology	Yes	Yes	No	No	No	No
IP address (can be set, DCP)	Yes	Yes	Yes	Yes	No	No
PROFINET prioritization	Yes	Yes	Yes	Yes	Yes	Yes
PROFINET diagnosis	Yes	Yes	No	No	No	No
PROFINET MRP slave	Yes	Yes	No	No	No	No
Diagnosis options	Yes	Yes	Yes	Yes	No	No
Mirror port	Yes	Yes	Yes	Yes	No	No
Automatic PROFINET baptism	Yes	Yes	No	No	No	No
GSDML file	Yes	Yes	No	No	No	No
Standards and approvals	UL, CSA	UL, CSA	UL, CSA	UL, CSA	UL, CSA	UL, CSA
Step 7	Yes	Yes	No	No	No	No
TIA portal	Yes	Yes	No	No	No	No
PC Wox	Yes	Yes	No	No	No	No

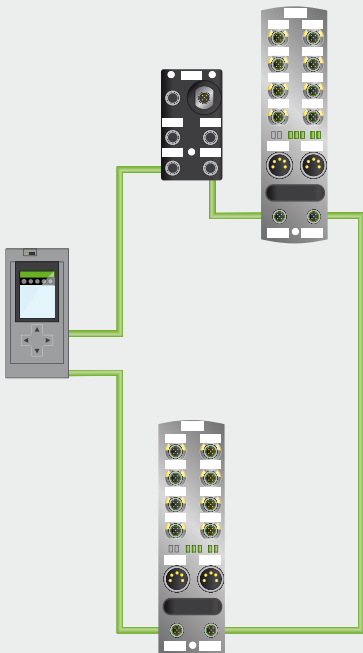
PROFINET MANAGED SWITCHES – CONNECTIVITY FOR INDUSTRIAL APPLICATIONS

Murrelektronik's **managed switches** are designed for connectivity in industrial areas. They make network setup quick and their extensive diagnostic options allow errors to be quickly spotted and corrected. This minimizes downtime. Neighborhood detection makes component replacement straightforward. Prioritization of Profinet data packages is also a plus.



MRP RING FORMATION

Profinet managed switches can be integrated into a network as a slave. This makes redundant wiring and failsafe operation possible. If the data communication path is interrupted, devices in the communication chain are served by the other side of the ring.



- **Mirror ports** enable access to network data communication for logging data strings – via a free switch port. Users can take the data for analysis. Errors, the source of costly downtimes, can thus be avoided through predictive maintenance, and in addition, the machine can be utilized to better effect.
- **Prioritized Data Transfer**
PROFINET data packages are prioritized within a network and thus transferred by the switches with greater reliability. Performance is increased by focusing on the real-time application of relevant data.
- **Automatic PROFINET Naming**
The control system names each device within the PROFINET topology. If a device is replaced, all the data required for resuming operation is automatically carried over to the replacement device via the control system. This saves time as the individual components do not have to be manually configured before operation resumes.

■ **Neighborhood detection**

Components support LLDP (Link Layer Discovery Protocol). They periodically send and receive information about themselves. In this way, the network topology is documented and stored in neighborhood tables. All users receive the protocol and thus share information about their neighbors, while PROFINET users enjoy a corresponding overview of their topology. Device failures are picked up by the neighborhood detection function.

If a PROFINET managed switch is included in the topology, the device can be replaced without any tools. The replacement device is identified and configured automatically. This method is part of the overall "device replacement without engineering tools" concept.



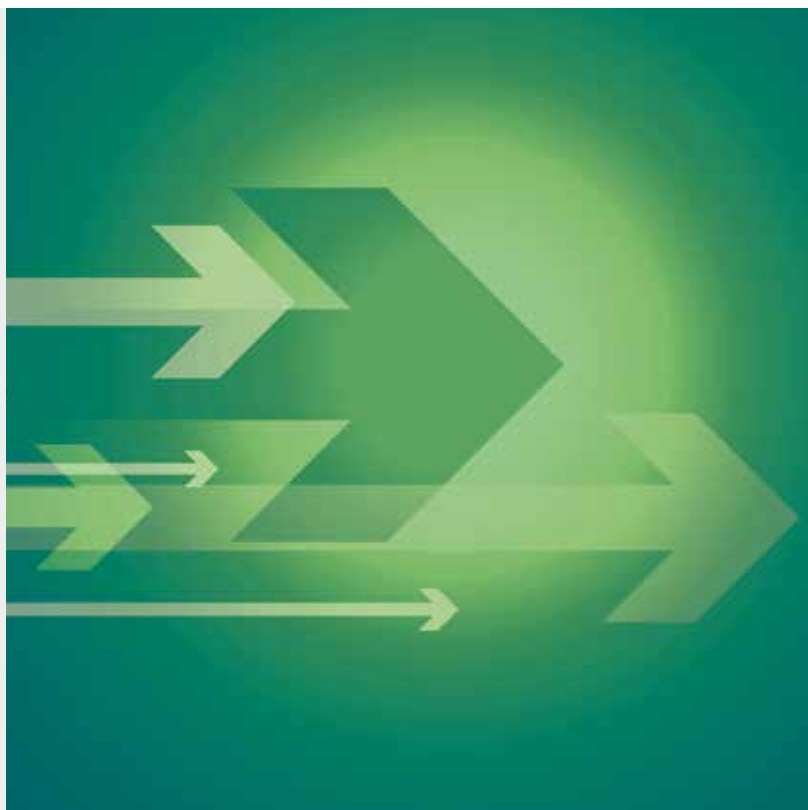
CENTRAL INTERFACE

Murrelektronik's efficient switches play a key role in PROFINET installations. Besides linear structures, they also enable star, tree and ring topologies.

- **MRP ring formation as a slave**
- **Mirror ports**
- **Optimized data transfer via prioritization**
- **Automatic PROFINET Naming**
- **Neighborhood detection**

RSTP – RAPID SPANNING TREE PROTOCOL

RSTP is a network protocol using in local networks to deactivate redundant paths. If necessary, these paths can be reactivated. In RSTP protocols, failure no longer affects the entire network structure, but is now confined to defective inaccessible paths. Intact paths remain up and running while the new topology is calculated. This ensures that only one active path exists at any time between two end devices. If it cannot be used, the protocol automatically falls back on the deactivated path ensuring high network availability.



ORDERING INFORMATION

Profinet managed switch



Order data			
Art. No.	58184	58185	58186
Ports			
Fieldbus	5 × M12 (female connector), D-coded	4 × RJ45	6 × RJ45
System supply	1 M12 (male connector), A-coded	Spring clamp terminal: 0.2...2.5 mm ²	
Supply voltage	1 x 24 V via M12, A-coded	2 x 24 V via MSTBO 2.5/4-G1R	
Polarity protection	yes		
Relay for alarm contact	no		yes
Technical data			
Operating voltage	9.5...31.5 V		
Max. power consumption	3 W	2.5 W	3 W
Transfer rate	10/100 Mbit/s		
Operating mode	Autocrossing/Autonegotiation		
Switch management			
Switch form	PROFINET – managed switch		
Web server	HTTP, HTTPS		
Vlan (Qos) IEEE 802.1Q	yes		
Port mirroring	yes		
Protocols	DHCP, SNMP (v1, v2c, v3), RSTP, STP, LLDP, NTP, RMON, SSH (CLI)		
Remote maintenance	Open VPN		
Alarm contact	no		yes
Fieldbus	Profinet, Ethernet, Ethernet/IP		
General data			
Protection type	IP67	IP20	
Enclosure	Black plastic		
Fastening type	3-hole screw fastening	Mounting rail DIN (EN 50022)	
Temperature range	0 ... +60 °C (storage temperature -40 ... +85 °C)		
Dimensions H x W x D (mm)	105×60×40 mm	111×22.5×99 mm	111×45×99 mm
Weight	Approx. 250 g	Approx. 130 g	Approx. 250 g
Max. altitude	3000 m		
Shock/vibration	30g/10g	15g/1g	
Profinet			
Addressing	DCP		
FSU (Fast Start-Up)	no		
Shared device/input	no		
Specification	V2.3, Conformance Class B		
MRP	Yes/slave		
Diagnosis			
Communication status	per LED, LLDP		
Monitoring – no voltage	yes		

ORDERING INFORMATION

Lite managed switch



Order data			
Art. No.	58183	58181	58182
Ports			
Fieldbus	5 × M12 (female connector), D-coded	4 × RJ45	6 × RJ45
System supply	1 M12 (male connector), A-coded	Spring clamp terminal 0.2...2.5 mm ²	
Supply voltage	1 x 24 V via M12, A-coded	2 x 24 V via MSTBO 2.5/4-G1R	
Polarity protection	yes		
Relay for alarm contact	no		yes
Technical data			
Operating voltage	9.5...31.5 V		
Max. power consumption	3 W	2.5 W	3 W
Transfer rate	10/100 Mbit/s full duplex		
Operating mode	Autocrossing/Autonegotiation		
Switch management			
Switch form	Lite – managed switch		
Web server	HTTP, HTTPS		
Vlan (Qos) IEEE 802.P	yes		
Port mirroring	yes		
Protocols	DHCP, SNMP (v1, v2c, v3), RSTP, STP, LLDP, NTP, RMON, SSH (CLI)		
Remote maintenance	Open VPN		
Alarm contact	no		yes
Fieldbus	Profinet, Ethernet, Ethernet/IP		
General data			
Protection type	IP67	IP20	
Enclosure	Black plastic		
Fastening type	3-hole screw fastening	Snaps onto mounting rail (EN 50022)	
Temperature range	0 ... +60 °C (storage temperature -40 ... +85 °C)		
Dimensions H x W x D (mm)	105×60×40 mm	111×22.5×99 mm	111×45×99 mm
Weight	Approx. 250 g	Approx. 130 g	Approx. 250 g
Max. altitude	3000 m		
Shock/vibration	30g/10g	15g/1g	
Diagnosis			
Communication status	per LED, LLDP		
Monitoring – no voltage	yes		

UNMANAGED SWITCHES

Murrelektronik's **unmanaged switches** enable the straightforward, compact connection of Ethernet devices. They are a heavy duty solution for industrial applications in rugged environments like machine tools and packaging machines. They are vibration-proof, resistant to EMC influences and suitable for a wide temperature range.

Powering IP67 unmanaged switches

Murrelektronik's IP67 switches can be powered directly via an output port of a fieldbus module like our Impact67, MVK Metal or SOLID67.



MADE IN
GERMANY

Xelity switches are produced at Murrelektronik's headquarters in Oppenweiler. We adhere to a zero error policy in all areas and continuously invest in machinery, systems and quality control to further develop and improve technical processes. By involving our suppliers, integrating heavy duty processes and consistently implementing process optimization measures, we produce high quality, state-of-the-art products.



XELITY®

Although developed and produced in Germany **Xelity®** series switches are inexpensive. Once complete, the series will include managed and unmanaged switches with a choice of 4, 6, 8, 16 or 24 ports in a compact housing. Unmanaged devices with 4, 6 or 8 RJ45 ports will be available soon. The switches have a similar housing with push in terminals for the power connection that make installation simple. They are resistant to EMC influences and are able to be redundantly supplied with power to ensure system availability. They prioritize Profinet protocols while transferring data packages of up to 100 Mbit/s. The high temperature range (-25 to +60C) and UL listing allow for worldwide usage.

**DATA TRANSFER IN GIGABIT SPEED WITH 8-PORT SWITCH
(ART. NO. 58173, 58176)**

Murrelektronik's 8-port gigabit switches enables integration of devices which generate large quantities of data in short time frames, like cameras with image data. The gigabit switch also supports jumbo frames (up to 9216 bytes) and VLAN PRIORITIZING TO IEEE 802.3x standard.

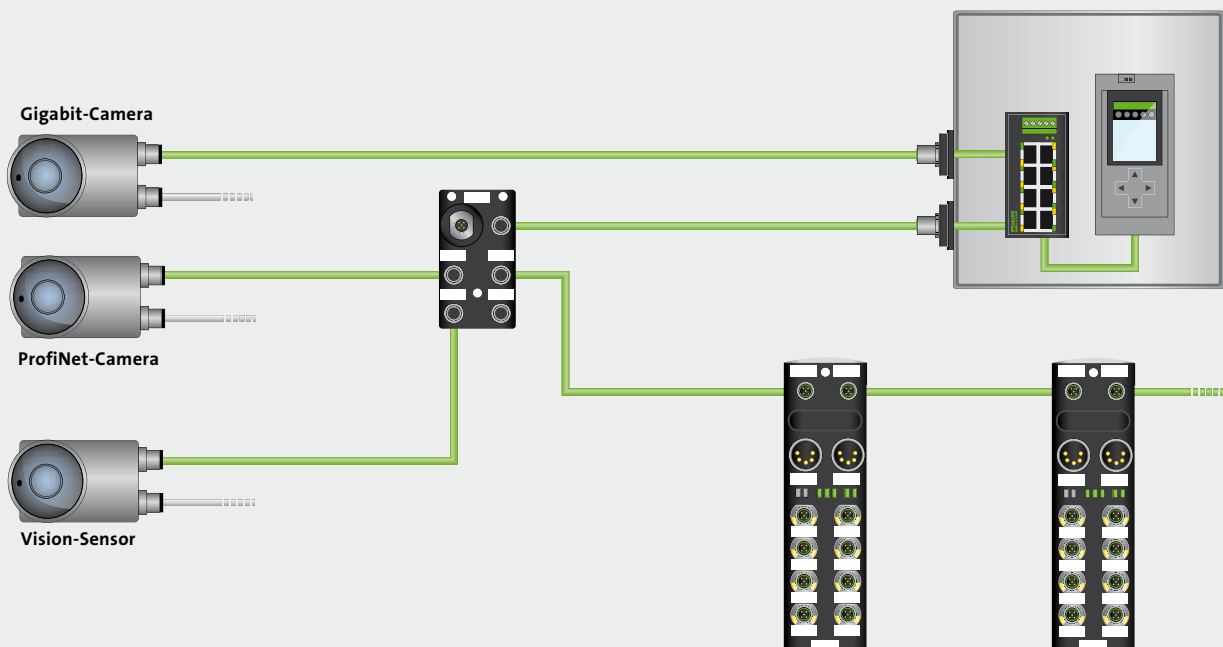


NOW AVAILABLE IN A 16 PORT VERSION!

- 16-port unmanaged switch with Profinet prioritization
- 2 gigabit Ethernet uplink ports and 14 fast Ethernet downlink ports
- Redundant power supply in metal housing

IP67 CONNECTIVITY

- 4 or 8 M12 ports (d-coded)
- EMC Resistant Housing
- Vibration-proof
- Wide temperature range (-25...60 °C)
- Profinet prioritization (QoS IEEE 802.1q)
- Redundant power supply (18...30 V)



ORDERING INFORMATION

Unmanaged switch



Order data			
Art. No.	58810	58811	58812
Ports			
Fieldbus	4 × RJ45	6 × RJ45	8 × RJ45
Switch power	Push-in terminal: 0.2...2.5 mm ²		
Technical data			
Operating voltage	+9.5...31.5 V		
Transfer rate	10/100 Mbit/s full duplex		
Operating mode	Autocrossing/Autonegotiation		
Switch management			
Web server	no		
Vlan (Qos) IEEE 802.1Q	yes		
Port mirroring	no		
Protocols	no		
Remote maintenance	no		
Alarm contact	no		
Fieldbus	Profinet, Ethernet, Ethernet/IP		
General data			
Protection type	IP20		
Enclosure	Black plastic		
Assembly	snaps onto mounting rail TH35 (EN 60715)		
Temperature range	-25 ... +60 °C (storage temperature -40 ... +85 °C)		
Dimensions H × W × D	140 × 30 × 85.1 mm	140 × 30 × 85.1 mm	105 × 41.6 × 85.1 mm
Weight	150 g	170 g	190 g
Maximum altitude	3000 m		

ORDERING INFORMATION

Unmanaged switch



Order data			
Art. No.	58151/58152		58171
Ports			
Fieldbus	4/8 x RJ45		8 x RJ45
Switch power	Spring clamp terminal: 0.2...2.5 mm ²		Screw plug-in terminal: 0.2...1.5 mm ²
Technical data			
Operating voltage	2 x 9...48 V DC, redundant		2 x 9...30 V DC, redundant
Transfer rate	10/100 Mbit/s full duplex		
Operating mode	Autocrossing/Autonegotiation		
Switch management			
Web server	no		
Vlan (Qos) IEEE 802.P	yes		
Port mirroring	no		
Protocols	no		
Remote maintenance	no		
Alarm contact	no		
Fieldbus	Profinet, Ethernet, Ethernet/IP		
General data			
Protection type	IP20		
Enclosure	Black metal		
Assembly	snaps onto mounting rail TH35 (EN 60715)		
Temperature range	-10 ... +70 °C (storage temperature -40 ... +85 °C)		
Dimensions H x W x D	110 x 22.5 x 89.6 mm/110 x 45.3 x 89.6 mm	90 x 45.2 x 78 mm	

ORDERING INFORMATION

Unmanaged switch



Order data			
Art. No.	58173	58174	58176
Ports			
Fieldbus	8 x RJ45	16 x RJ45	8 x RJ45
Switch power	Screw plug-in terminal: 0.2...1.5 mm ²		
Technical data			
Operating voltage	2 x 9...48 V DC, redundant		2 x 9...30 V DC, redundant
Transfer rate	10/100/1000 Mbit/s full duplex	14 x 10/100 & 2x 10/100/1000 Mbit/s full duplex	8x 10/100/1000 Mbit/s full duplex
Operating mode	Autocrossing/Autonegotiation		
Switch management			
Web server	no		
Vlan (Qos) IEEE 802.P	yes		
Port mirroring	no		
Protocols	no		
Remote maintenance	no		
Alarm contact	no		
Fieldbus	Profinet, Ethernet, Ethernet/IP		
General data			
Protection type	IP20		
Enclosure	Black metal		Black plastic
Assembly	snaps onto mounting rail TH35 (EN 60715)		
Temperature range	-10 ... +70 °C (storage temperature -40 ... +85 °C)	0 ... +70 °C (storage temperature -20 ... +70 °C)	0... +60 °C (storage temperature -10 ... +70 °C)
Dimensions H x W x D	90 x 45.2 x 78 mm	145 x 54 x 113 mm	90 x 45.2 x 78 mm
Diagnosis			
Communication status	per LED		
Monitoring – no voltage	yes		

ORDERING INFORMATION

Unmanaged switch

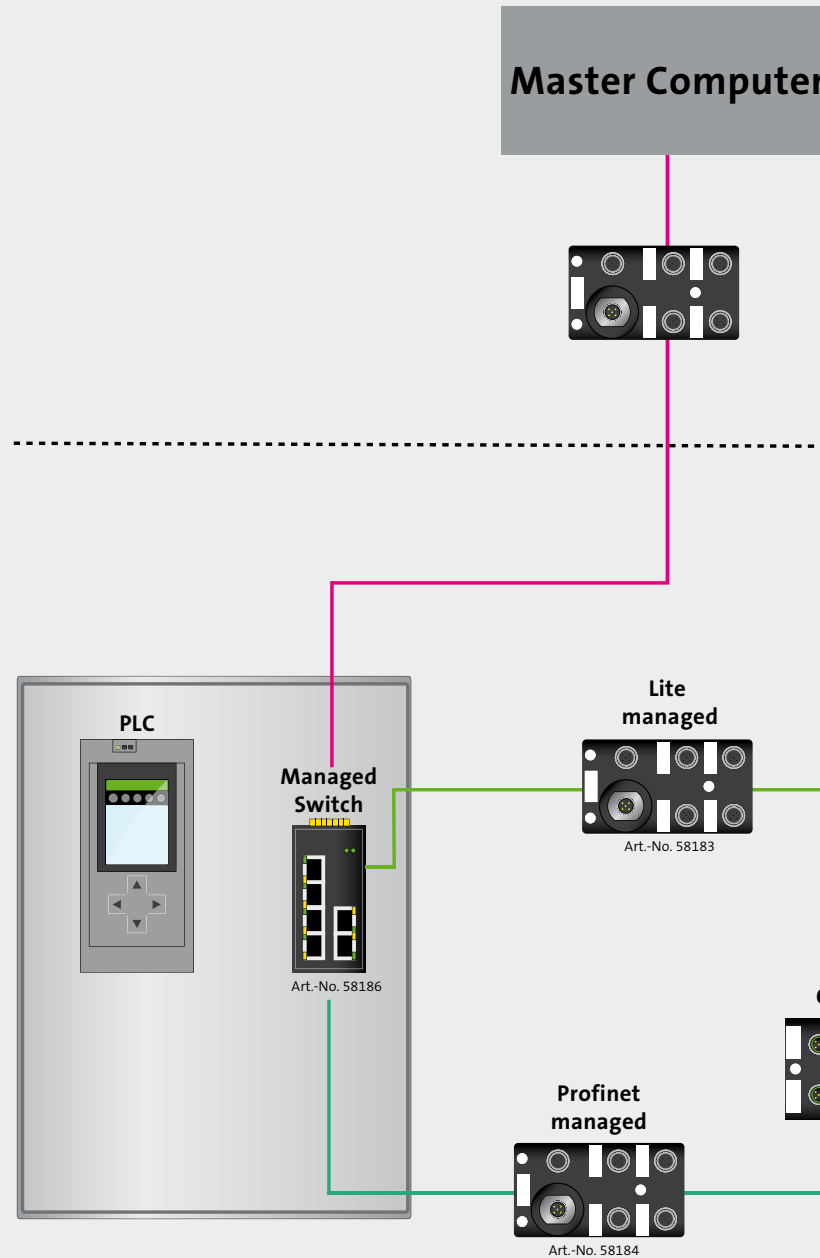


Order data		
Art. No.	58160	58161
Ports		
Fieldbus	4 × M12 (female connector), D-coded	8 × M12 (female connector), D-coded
System supply	1 M12 (male connector), A-coded	1 M12 (male connector), A-coded
Technical data		
Operating voltage	2 × 18...30 V DC, redundant	
Transfer rate	10/100 Mbit/s full duplex	
Operating mode	Autocrossing/Autonegotiation	
Switch management		
Switch form	Unmanaged switch	
Web server	no	
VLAN (QoS) IEEE 802.p	yes	
Port mirroring	no	
Protocols	no	
Remote maintenance	no	
Alarm contact	no	
General data		
Protection type	IP67	
Enclosure	Zink die-cast, matte nickel-plated	
Temperature range	-25 ... +60 °C (storage temperature -40 ... +80 °C)	
Fastening type	4-hole screw fastening	
Dimensions H x W x D (mm)	95 × 55 × 31 mm	145 × 55 × 31 mm
Diagnosis		
Communication status	per LED	
Monitoring – no voltage	yes	

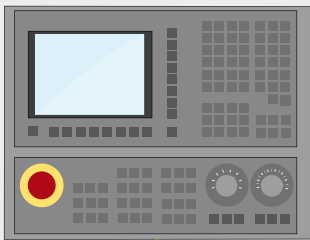
IMPLEMENTATION AREAS

Switches play a number of roles in installations.

They link PLCs with Ethernet users and they are also used as fieldbus switches to connect a wide range of modules.



NAT-SWITCH



ETHERNET

Cube 67 Bus node



Art.-No. 56526

MVK Profinet



Art.-No. 55532

PROFI[®]
NET

Impact 67
Profinet



Art.-No. 55132

Camera Ethernet
100 Mbit



MODULE I/O BUS

NAT SWITCH

NAT function

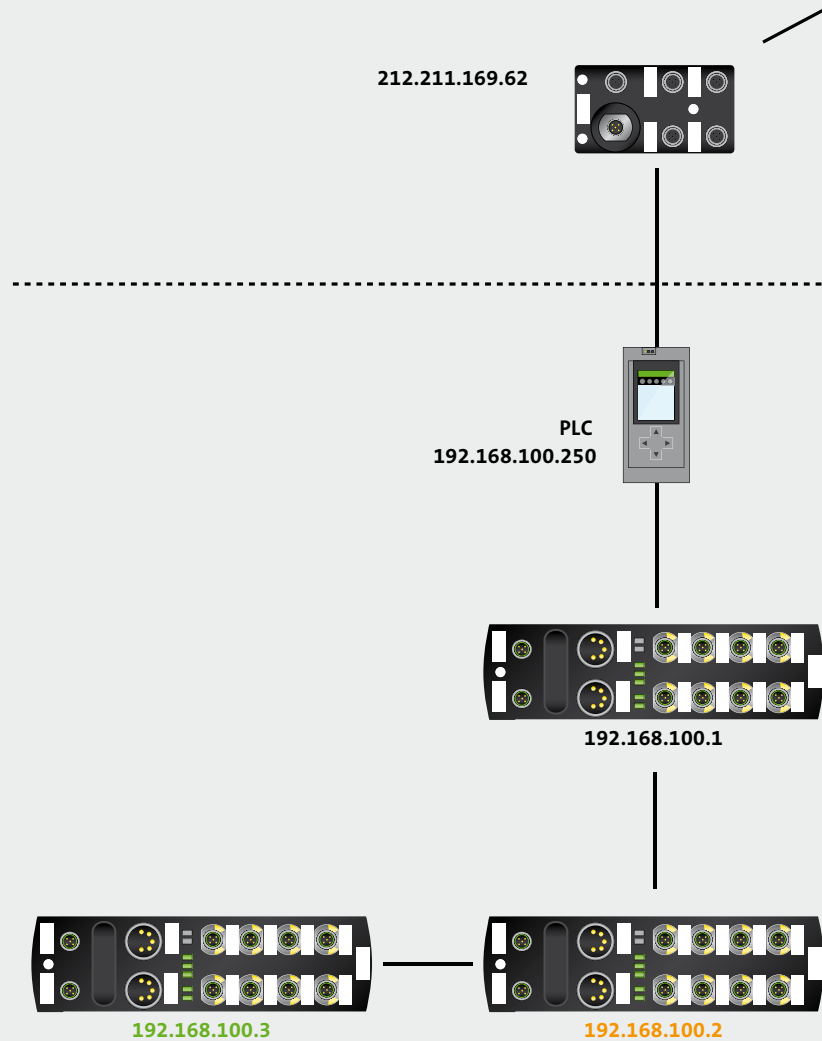
NAT = Network Address Translation

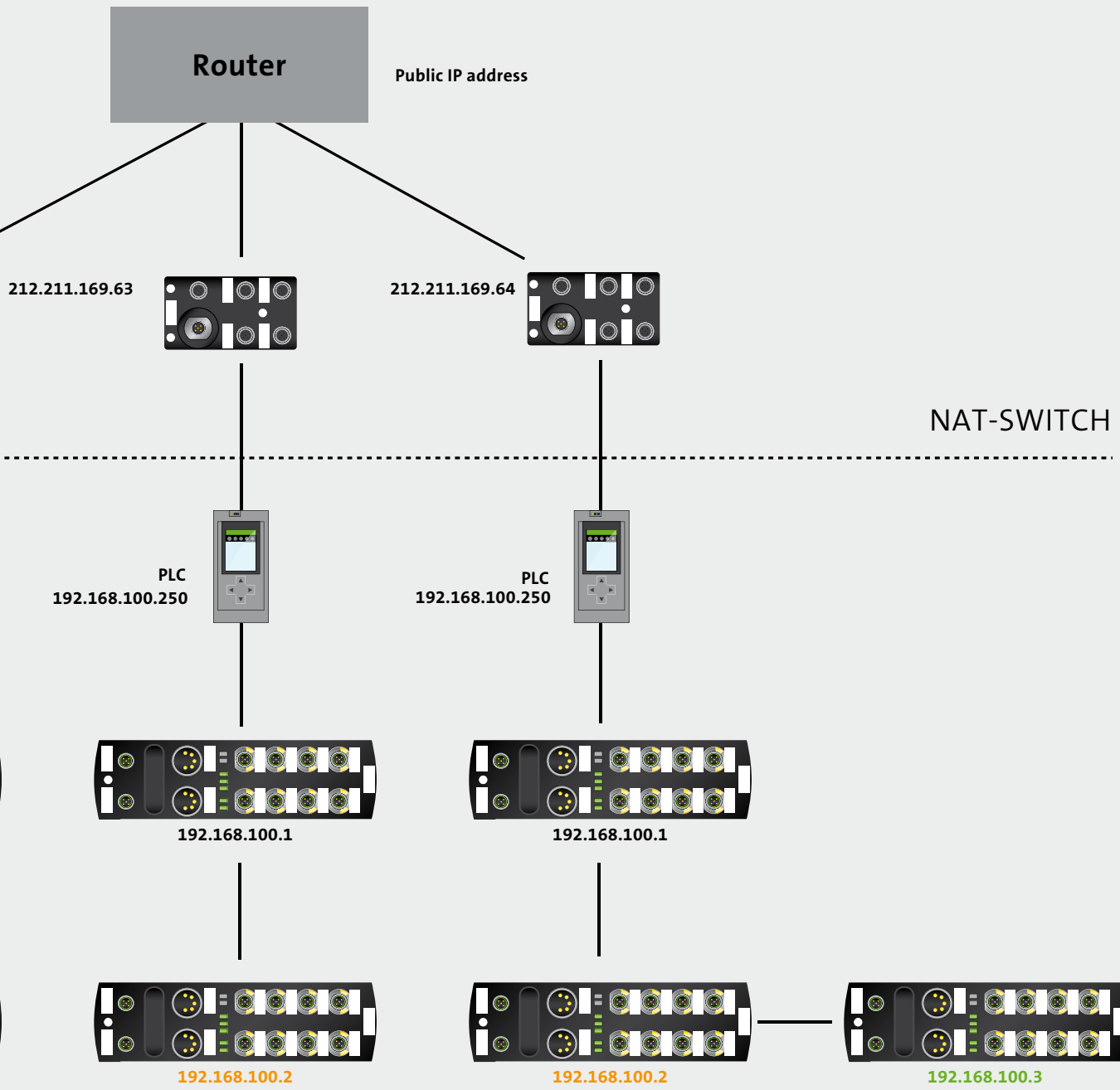
Address conflicts occur when machinery and modules have the same address in a company network.

NAT switches are used to separate IP address ranges.

Only the requested server can set up data communication with a machine.

Other servers sending data to the switch are blocked by the firewall to suppress network attacks.





CONNECTION CONCEPTS

FACTS WORTH KNOWING

Every connector at Murrelektronik is fully tested.

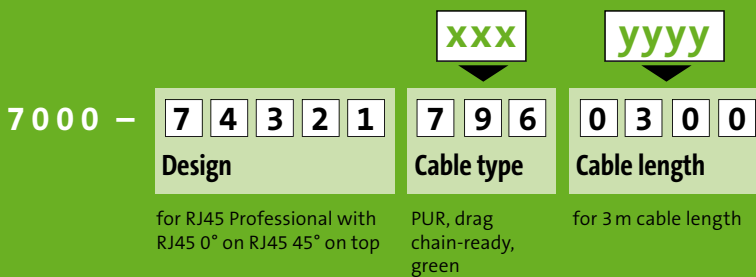
- ↘ Electrical
- ↘ High voltage
- ↘ Function
- ↘ Pin connection
- ↘ Short circuit
- ↘ Visual check



MODULAR ARTICLE NUMBERS

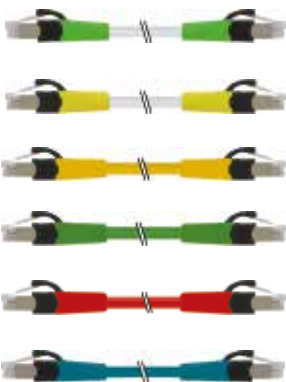
xxx = art. no. of the desired cable type

yyyy = cable length



Cable type	Art. No.
PUR, drag chain-ready, yellow	675
PUR, drag chain-ready, blue	677
PUR, flexible installation, green	794
PUR, torsion, green	793
PUR, drag chain-ready, green	796
PUR, drag chain-ready, purple	798
PVC, drag chain-ready, green	800
PUR, drag chain-ready, black	851
PUR, drag chain-ready, green	791
PUR, drag chain-ready, red	792





RJ45 CABINET LINE







Name	Art. No.	suitable for
Cabinet Line RJ45 St. 0°/ RJ45 St. 0°, gray, Ethernet 4-pole, AWG26 (0.14mm ²)	7000-74701-777yyyy	all commercially available industrial Ethernet systems
Cabinet Line RJ45 St. 0°/ RJ45 St. 0° gigabit, gray, 8-pole, AWG26 (0.14mm ²)	7000-74711-778yyyy	
Cabinet Line RJ45 St. 0°/ RJ45 St. 0° gigabit, yellow, 8-pole, AWG26 (0.14mm ²)	7000-74711-378yyyy	
Cabinet Line RJ45 St. 0°/ RJ45 St. 0° gigabit, green, 8-pole, AWG26 (0.14mm ²)	7000-74711-478yyyy	
Cabinet Line RJ45 St. 0°/ RJ45 St. 0° gigabit, red, 8-pole, AWG26 (0.14mm ²)	7000-74711-578yyyy	
Cabinet Line RJ45 St. 0°/ RJ45 St. 0° gigabit, blue, 8-pole, AWG26 (0.14mm ²)	7000-74711-878yyyy	

RJ45 PROFESSIONAL

4-pole, overmolded | transfer properties in line with CAT5 ISO/IEC 11801 Class D, AWG22 (0.34mm²)

				
	RJ45 connector 0°	RJ45 connector 45° on top	RJ45 connector 45° on bottom	RJ45 connector 45° on left
RJ45 connector 0°	7000-74301-xxxxxxx	7000-74321-xxxxxxx	7000-74341-xxxxxxx	7000-74361-xxxxxxx
RJ45 connector 45° on top	7000-74321-xxxxxxx	7000-74401-xxxxxxx	7000-74421-xxxxxxx	7000-74441-xxxxxxx
RJ45 connector 45° on bottom	7000-74341-xxxxxxx	7000-74421-xxxxxxx	7000-74481-xxxxxxx	7000-74501-xxxxxxx
RJ45 connector 45° on left	7000-74361-xxxxxxx	7000-74441-xxxxxxx	7000-74501-xxxxxxx	7000-74541-xxxxxxx
RJ45 connector 45° on right	7000-74381-xxxxxxx	7000-74461-xxxxxxx	7000-74521-xxxxxxx	7000-74561-xxxxxxx
RJ45 connector 90° on top	7000-74327-xxxxxxx	7000-74407-xxxxxxx	–	–
RJ45 connector 90° on bottom	7000-74347-xxxxxxx	7000-74427-xxxxxxx	7000-74487-xxxxxxx	–
RJ45 connector 90° on left	7000-74367-xxxxxxx	7000-74447-xxxxxxx	7000-74507-xxxxxxx	7000-74547-xxxxxxx
RJ45 connector 90° on right	7000-74387-xxxxxxx	7000-74467-xxxxxxx	7000-74527-xxxxxxx	7000-74567-xxxxxxx

				
	RJ45 connector 45° on right	RJ45 connector 90° on top	RJ45 connector 90° on bottom	RJ45 connector 90° on left
RJ45 connector 0°	7000-74381-xxxxxxx	7000-74327-xxxxxxx	7000-74347-xxxxxxx	7000-74367-xxxxxxx
RJ45 connector 45° on top	7000-74461-xxxxxxx	7000-74407-xxxxxxx	7000-74427-xxxxxxx	7000-74447-xxxxxxx
RJ45 connector 45° on bottom	7000-74521-xxxxxxx	–	7000-74487-xxxxxxx	7000-74507-xxxxxxx
RJ45 connector 45° on left	7000-74561-xxxxxxx	–	–	7000-74547-xxxxxxx
RJ45 connector 45° on right	7000-74581-xxxxxxx	–	–	–
RJ45 connector 90° on top	–	7000-74409-xxxxxxx	7000-74429-xxxxxxx	7000-74449-xxxxxxx
RJ45 connector 90° on bottom	–	7000-74429-xxxxxxx	7000-74489-xxxxxxx	7000-74509-xxxxxxx
RJ45 connector 90° on left	–	7000-74449-xxxxxxx	7000-74509-xxxxxxx	7000-74549-xxxxxxx
RJ45 connector 90° on right	7000-74587-xxxxxxx	7000-74469-xxxxxxx	7000-74529-xxxxxxx	7000-74569-xxxxxxx

				
	M12 connector 0°	M12 female connector 0°	M12 connector 90°	With open end cable
RJ45 connector 0°	7000-44711-xxxxxxx	7000-44621-xxxxxxx	7000-44761-xxxxxxx	7000-74101-xxxxxxx
RJ45 connector 45° on top	7000-44721-xxxxxxx	7000-44631-xxxxxxx	7000-44771-xxxxxxx	7000-74121-xxxxxxx
RJ45 connector 45° on bottom	7000-44731-xxxxxxx	7000-44641-xxxxxxx	7000-44781-xxxxxxx	7000-74141-xxxxxxx
RJ45 connector 45° on left	7000-44741-xxxxxxx	7000-44651-xxxxxxx	7000-44791-xxxxxxx	7000-74161-xxxxxxx
RJ45 connector 45° on right	7000-44751-xxxxxxx	7000-44661-xxxxxxx	7000-44801-xxxxxxx	7000-74181-xxxxxxx
RJ45 connector 90° on top	7000-44727-xxxxxxx	7000-44637-xxxxxxx	7000-44777-xxxxxxx	7000-74221-xxxxxxx
RJ45 connector 90° on bottom	7000-44737-xxxxxxx	7000-44647-xxxxxxx	7000-44787-xxxxxxx	7000-74241-xxxxxxx
RJ45 connector 90° on left	7000-44747-xxxxxxx	7000-44657-xxxxxxx	7000-44797-xxxxxxx	7000-74261-xxxxxxx
RJ45 connector 90° on right	7000-44757-xxxxxxx	7000-44667-xxxxxxx	7000-44807-xxxxxxx	7000-74281-xxxxxxx

M12 CONNECTORS FOR ADVANCED INDUSTRIAL ETHERNET APPLICATIONS

Murrelektronik's X-coded M12 cordsets are the solution for error-free, high-speed data transfer at speeds of up to 10 gigabits per second.

A metal cross (X-shaped) in the connector safely separates the four data pairs from each other while the internal shielding protects the cable from external interference.

The combination of our X-coded M12 connectors with highly resistant PUR cables equals a cordset designed for industrial applications.



■ Increased requirements

The demand for higher transfer rates is on the rise in industrial Ethernet applications. The best example of this are high speed vision systems, which generate a high data volumes. Standard communication structures are gaining in importance. **Industry-ready M12 connectors in Murrelektronik quality are the right solution for the job.**

- 10 Gbit/s data transfer rate according to Cat. 6A (ISO/IEC 11801)
- Soldered shield connection between cable and connector
- 360° shielding end to end
- IP65/67 rating
- Lengths to 50m



Name	Art. No.
M12 connector straight X-coding, open end cable	7000-21001-790xxxx
M12 connector angled X-coding, open end cable	7000-21021-790xxxx
M12 connector straight X-coding, M12 connector straight X-coding (connecting cable)	7000-51001-790xxxx
M12 connector X-coding, insulation displacement technique	7000-21101-0000000
M12 flange female connector X-coding, front panel mounting, dip-solder contacts	7000-21151-0000000
M12 flange female connector X-coding, rear panel mounting, dip-solder contacts	7000-21161-0000000

M12 CONNECTORS FOR ADVANCED INDUSTRIAL ETHERNET APPLICATIONS

Murrelektronik's Y-coded M12 cordsets transfer data and power in one connector.

The metal "Y" in the connector separates the four power transfer contacts from the four signal contacts in the pin arrangement making it possible to transfer up to 100 megabits per second of data while also providing 2 x 6A power.

Our Y-coded M12 connectors are combined with PUR cables making them suitable for a wide variety of moving applications.



■ Increased requirements

In industrial Ethernet applications, companies are focusing increasingly on installation costs. Parallel transfer of data and power over one cable helps reduce both the number of components required and costs.

Industry-ready M12 connectors in Murrelektronik quality are the right solution for the job.

- **100 Mbit/s data transfer rate according to Cat. 5e**
- **Power Transfer: up to 2 x 6A**
- **Soldered shield connection between cable and connector**
- **360° shielding end to end**
- **IP65/67 rating**



Name	Art. No.
M12 connector straight Y-coding, open end cable	7000-15501-831xxxx
M12 connector angled Y-coding, open end cable	7000-15521-831xxxx
M12 connector straight Y-coding, M12 connector straight Y-coding (connecting cable)	7000-47001-831xxxx
M12 M12 flange female connector Y-coding, dip-solder contacts	7000-15701-0000000
M12 flange female connector Y-coding, dip-solder contacts	7000-15711-0000000



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