



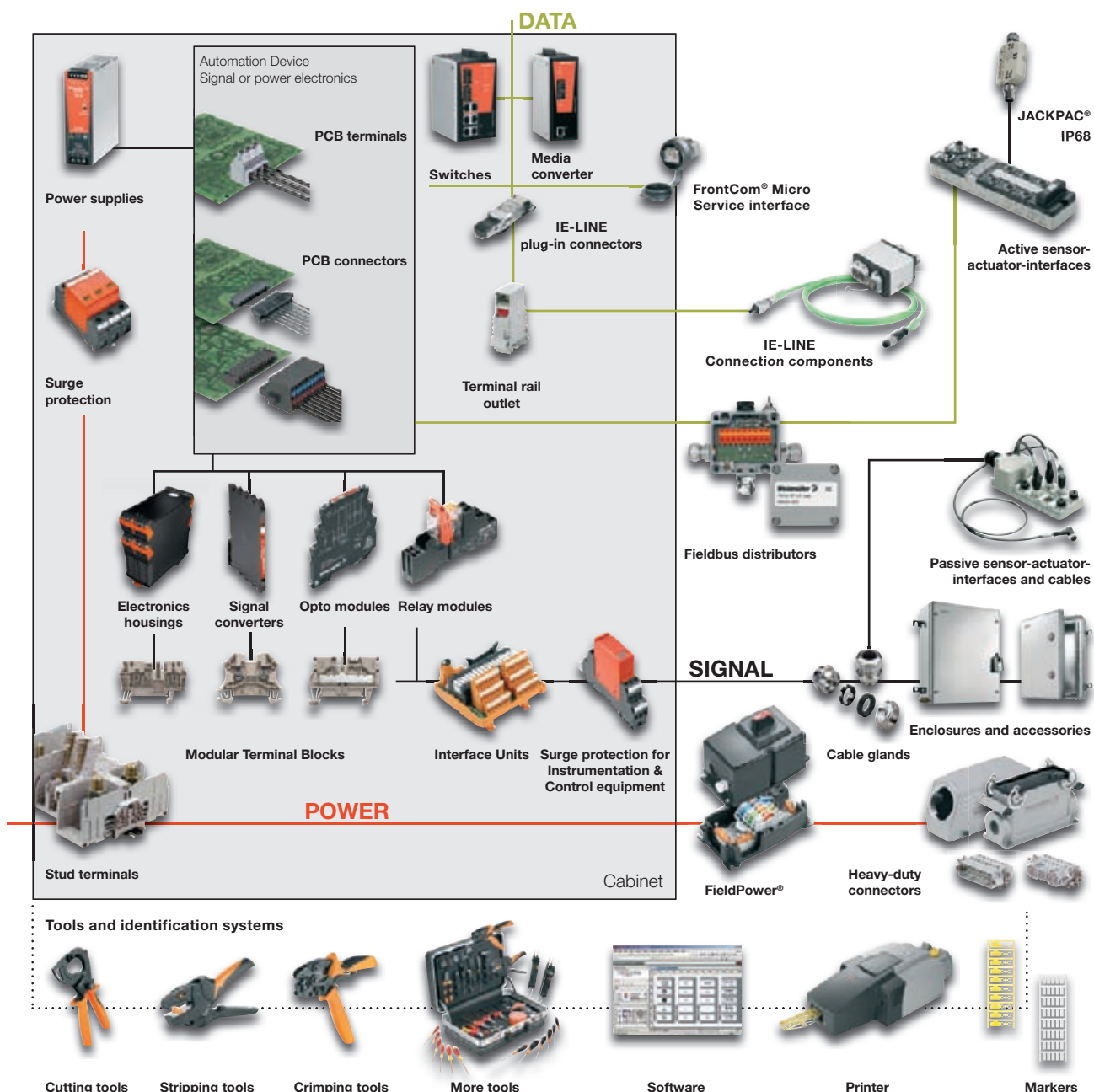
Industrial Ethernet

Catalogue

Product Portfolio

Weidmüller is a leading international provider of solutions for electrical connectivity, transmission and conditioning of power, signal and data in industrial environments. The company with headquarters in Detmold/Germany develops, produces and sells products in the field of electrical connectivity and electronics all over the world.

www.power-signal-data.com



All the catalogues at a glance

	Order No.
Catalog 1 Modular Terminal Blocks	5661400000
Catalog 2 PCB Terminals, PCB Connectors and Housings for Electronics	1250030000
Catalog 3 RockStar® – Heavy Duty Connectors	5664240000
Catalog 4.1 Electronics – Analogue Signal Conditioning	1203510000
Catalog 4.2 Electronics – Relays and Optos	1282330000
Catalog 4.3 Electronics – Power Supplies	1282390000
Catalog 4.4 Electronics – Surge protection	1271290000

	Order No.
Catalog 4.5 Electronics – Interface units and PLC solutions	1252080000
Catalog 5 Enclosures and Cable Glands	1274520000
Catalog 6 Tools	1161520000
Catalog 7 Identification systems	1125590000
Catalog 8 Sensor Actuator Interface	1235620000
Catalog 9 Industrial Ethernet	1274570000
Product information FieldPower® – decentralised power distribution	1229860000

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System cables assembled

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FO connecting cables

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FO patch cables

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FO system cables

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Accessories

Tools

Copper cabling

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Tools

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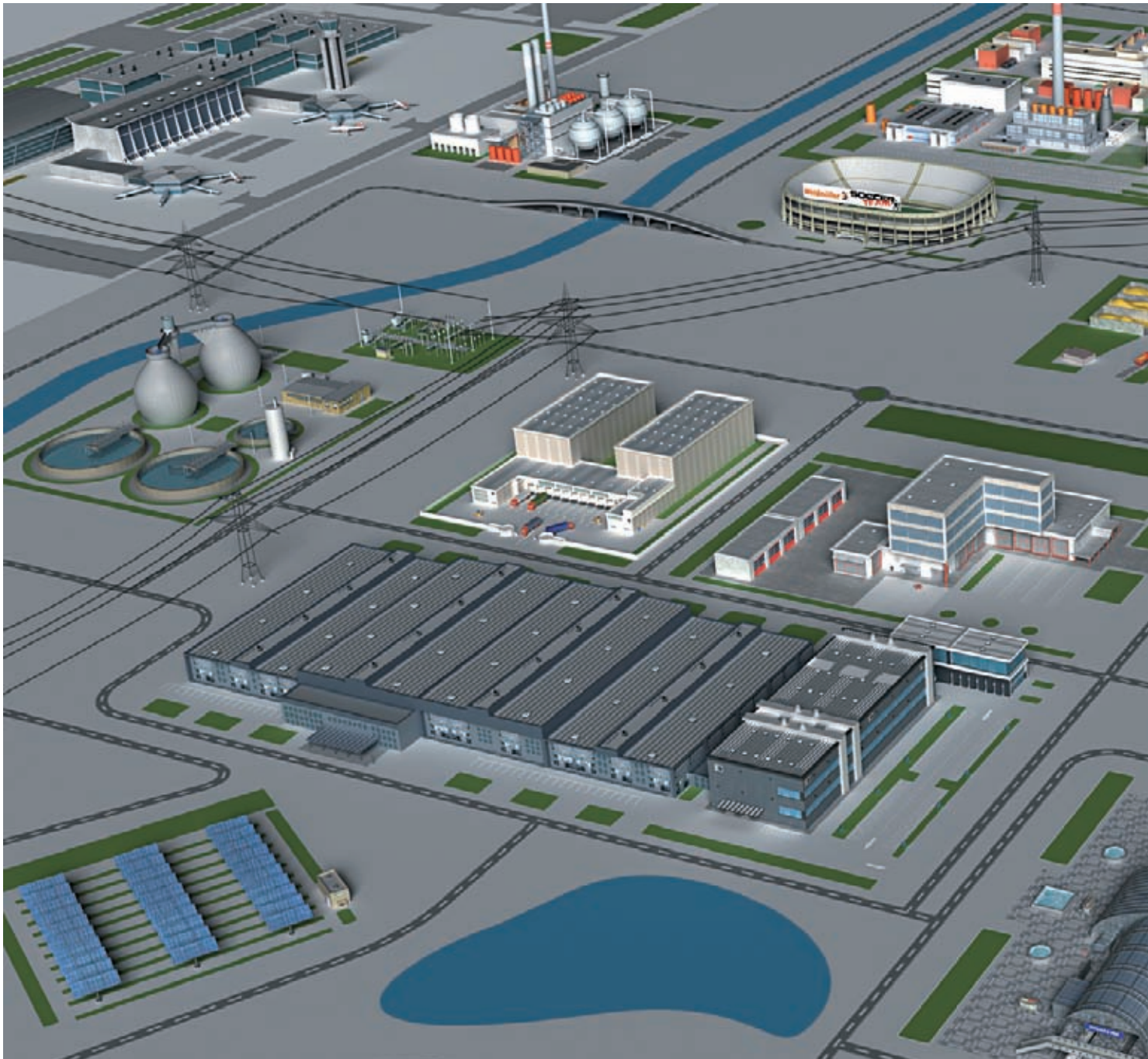
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Industrial Ethernet

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Intended for use in Industrial Ethernet



The trend to network industrial plant components using Ethernet protocols was already apparent several years ago. Ethernet communication is now well established in all market segments; automotive, general machine construction, process industry, transportation as well in the energy branch. The requirements of the different branches differ in terms of the protocols,

environmental conditions, certifications and standardisations. As well as being a leading provider of industrial connection and network products, Weidmüller covers these differing requirements with a comprehensive and high-quality product range of active and passive components for Ethernet communications.



The basic requirements of most of these branches are high reliability, availability and safeguarding against failure. These are met by extremely high MTBF times of the active network components. Maximum reliability and simple operation is ensured through Weidmüller's high-quality **STEADYTEC®** connector system.

Together Weidmüller's network components create a complete communications infrastructure for industrial applications in machine construction, process and plant engineering and energy.

Automotive



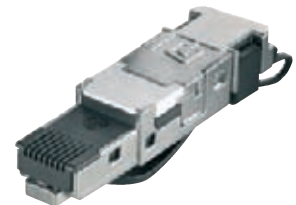
Car manufacturers in AIDA (the German car manufacturers' automation initiative) are the driver behind the use of Industrial Ethernet in the manufacturing sector, as they clearly prefer the use of PROFINET for communication between machines and equipment parts. To make the most savings in modern communications structures, Industrial Ethernet in the automotive industry is homogeneous from the corporate management level down to the field level.

New production plants in North American car production are also being exclusively automated using Industrial Ethernet. Here the Real-Time Ethernet protocol Ethernet/IP is used. This, in the same way as PROFINET and other protocols, means there are different requirements for the connector systems used and the active network devices.

Extremely harsh environmental conditions – such as may be found where industrial robotics are used, for example – place high requirements on the components used. Cabling needs to be torsion resistant and there are increased EMC demands placed on plug-in connectors and active devices. For these application fields, Weidmüller offers a complete product range consisting of copper and fibre-optic connectors and passive hand-tools that are specifically designed for the requirements of cabling robotic systems.

The use of active devices with powerful redundancy mechanisms is needed to prevent network failures. Weidmüller's managed switches meet these requirements with their particularly fast recovery time of under 20 ms when an error occurs.

General machine construction



Important parts of communications in machinery and device construction are networking machine segments and device parts and connecting them to the higher-level office network. Many serial devices are connected to the Ethernet infrastructure to protect investments and because of the various different communication protocols in use. Weidmüller offers active components for this which convert the protocols. By simply integrating devices with serial interfaces, you get protection for your investments in existing automation components.

The volume of data in networks is steadily rising with the applications used, for example with camera-based quality control. Weidmüller easily meets these increased demands with its product range of high-performance Gigabit switches and plug-in connectors capable of 10 Gigabit transfer.

The extensive plug-in connector range also meets the higher demands in terms of EMC as well as shock, vibration and temperature resistance and facilitates easy on-site assembly.

Dragline cable compatible connection cables from Weidmüller are used on moving parts of complex machines. Hard to reach areas can be covered using the wireless modules that are available.

Process



Weidmüller's network components for the process industry allow their use in explosion hazard areas with their certification - Class 1 Div. 2 and ATEX. The active components have high fault-tolerance and ensure high system availability with redundancy mechanisms like trunking and ring-redundancy as well as RSTP.

Long distances can be bridged using fibre-optic media in large process plants. There are requirements placed on the protection categories of the individual components as these are found in the field. The harsh environments in process plants are characterised by high temperature variations, vibrations, rain, dust as well as electromagnetic influences. Weidmüller's active and passive Ethernet components withstand these influences.

It is particularly important to make sure the communication between various parts of the plant is secure and structured in security relevant processing areas. Weidmüller's Ethernet switches support network management and security functions like IGMP Snooping, IEEE 802.1X, QoS and VLAN.

With this the devices form a secure and efficient bridge to the office communication and from there to the higher IT systems.

Active components

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Active components

Ethernet technology is an established standard in office communication and has existed for many years. Without it, effective communications between the different participants like PCs, printers, data servers etc. would no longer be possible.

In recent years this technology has been expanded under the term Industrial Ethernet and implemented in automation systems. The common goal of both manufacturer and user is to make networking automation system components easier and more effective. To make process data and diagnostic functions device-independent when exchanged between network participants, all equipment in a plant should be linked with just one bus technology.

Industrial applications, however, differ significantly from office applications. There are normally much higher demands placed on the communication devices in the industrial setting. These include, as examples:

- Installation conditions
- Environmental conditions
- Protocols
- Approvals

Weidmüller's Industrial Ethernet components meet all of these requirements as they have the properties listed below:

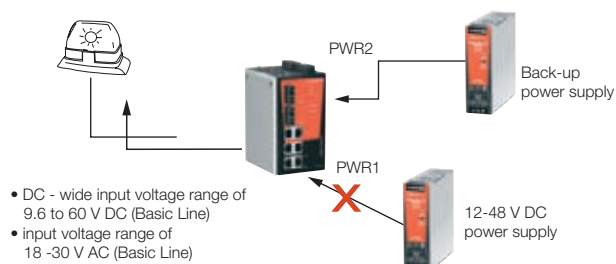
- Reliable (redundant) power supply for uninterrupted network operation
- Resistance to extreme temperatures
- Immune to electromagnetically caused malfunctions
- Insensitive to vibration, shock and corrosive environments
- Conformity with various certification standards
- Longevity

These rugged devices can therefore be used world-wide in different industries and applications.



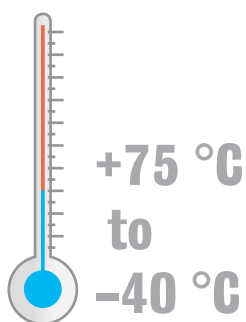
Stable and versatile power supply inputs for industrial applications

The redundant voltage inputs provide reliable functionality of the whole system. If a power supply fails, the redundant power source takes over the energy supply. All of Weidmüller's Industrial Ethernet components have a wide input voltage range of at least 12 to 48 V DC (Basic Line switches 9.6 to 60 V DC). They can also work with large fluctuations in voltage. As examples, with a rated 48 V DC input, a fluctuation of +20 % is acceptable and in one of 12 V DC a voltage drop of up to 20 % present no problems for the attached devices.



Suitable for use in extreme temperature environments

Industrial environments often present extreme temperature conditions. This means that devices are needed which can operate under extreme temperature fluctuations flawlessly. Therefore all Industrial Ethernet components undergo a burn-in test over several hours to ensure they function properly at the guaranteed temperature ranges (e.g. -40 °C to +75 °C).



Outstanding immunity to electromagnetic interference

The sturdy design of Weidmüller's Industrial Ethernet components also includes excellent electromagnetic compatibility and fully complies with the requirements of the EN50121-4, DNV and IEC 61000 standards.

Certified to industry standards

Extensive certifications confirm the reliability of Weidmüller's Industrial Ethernet components

- UL508 and UL60950-1
- Class I, Division 2 / ATEX Zone 2 for safe use in explosive hazard areas
- DNV/GL approval for use in maritime settings



Durability and reliability

- Many of the Weidmüller Ethernet components have relay outputs. These can be used for alarm signal notification (e.g. power failures or port problems). This means that in emergencies it is possible to react quickly to any failures.
- Weidmüller's unmanaged switches are protected from receiving too many broadcast packets. The switches discard broadcast or multicast packets if they exceed a threshold level in a given time. They then receive further broadcast and multicast packets after a given time has past, until the threshold level is reached again.
- All Weidmüller active Industrial Ethernet components are designed for a long in-service life, this can be seen from the high MTBF value. Weidmüller also guarantees its Industrial Ethernet components for a period of five years.

Active components

Basic Line



Weidmüller's Basic Line series consists of unmanaged Plug & Play switches in a rugged IP30 rated aluminium housing. The devices are available with Fast Ethernet and Gigabit Ethernet and provide an economical solution for Industrial Ethernet ports networks. One model is equipped with Fast Ethernet and Power-over-Ethernet ports. All devices have been developed for applications in harsh industrial environments and have international approvals such as CE, cULus, Class I Div. 2 / Atex and DNV / GL and are thus international applicable for different applications.

- Plug & Play switches in a rugged aluminium housing (IP30)
- Compact design
- Cost efficient entry-level switches
- Fast Ethernet variants with 5 and 8 Ports
- Versions with copper or fibre-optic interface (multimode and single-mode)
- 5 port Full-Gigabit Plug & Play Switch
- Power-over-Ethernet switch with 6 Fast Ethernet ports, thereof 4 PoE+ ports
- Approvals: cULus, Class I Div. 2 / Atex, DNV / GL

Value Line



Weidmüller's Value Line series consists of unmanaged and managed switches in a high quality IP30 rated metal housing. The devices are available with Fast Ethernet and Gigabit Ethernet ports. Managed switches of the Value Line support a variety of useful management functions, such as fast ring redundancy, VLAN, QoS, RMON, bandwidth management, port mirroring and warning by email message or relay. The ring redundancy can be set up easily using the web-based management interface, or with the DIP switches located on the top panel of the switches.

- Unmanaged Plug & Play switches in a high quality metal housing (IP30)
- Price-sensitive mid-range class
- Managed switches for entry into configurable network infrastructure
- Unmanaged 8 port Full-Gigabit switches
- Approvals: cULus, Class I Div. 2 / Atex, DNV / GL

Premium Line



Weidmüller's Premium Line series completes the switch range for the high-end sector and is particularly suitable for complex network solutions with high traffic levels. The devices are available in different versions - number of ports, transmission rate (Fast and Gigabit Ethernet) and the type of connection (copper and fibre-optic).

With their advanced ring redundancy technology (recovery time ≤ 20 ms), these devices increase the reliability and availability of your industrial network. The optional to use SFP transceivers offer a high degree of flexibility and the Gigabit variants allows the use in networks with high traffic loads also.

- Managed Fast Ethernet variants in a high quality metal housing (IP30)
- Managed Power-over-Ethernet switch with 6 Fast Ethernet ports, thereof 4 PoE+ ports
- Variants with 10 or 18 ports and Gigabit uplink ports
- Full-Gigabit switch with 9 ports
- Supports all standard protocols in TCP/IP-based industrial networks (e.g. Ethernet/IP, Modbus/TCP)
- Built-in redundancy mechanisms (recovery time ≤ 20 ms) for increased reliability in network ring structures
- Approvals: cULus, Class I Div. 2 / Atex, DNV / GL

Switches – quick-finder

		Ports total	2	5		6	8				
		Ports copper	1	5	4	6	8	5	6	6	7
		Ports fibre	1		1			3	2	3	1
		Ports SFP									
Order No.	Type										
Industrial Ethernet Switches											
1240840000	IE-SW-BL05-5TX			●							
1240850000	IE-SW-BL05T-5TX			●							
1240870000	IE-SW-BL05-4TX-1SCS				●						
1240880000	IE-SW-BL05-4TX-1ST				●						
1240890000	IE-SW-BL05-4TX-1SC				●						
1240900000	IE-SW-BL08-8TX					●					
1240910000	IE-SW-BL08-6TX-2SC								●		
1240920000	IE-SW-BL08T-6TX-2SC								●		
1240930000	IE-SW-BL08-6TX-2ST								●		
1240950000	IE-SW-BL08-7TX-1SCS										●
1241250000	IE-SW-BL05-5GT		5 GE								
1240980000	IE-SW-VL09T-6TX-3SC									●	
1241000000	IE-SW-VL16-16TX										
1241030000	IE-SW-VL16-14TX-2SC										
1241050000	IE-SW-VL16-14TX-2ST										
1240940000	IE-SW-VL08MT-8TX					●					
1240970000	IE-SW-VL08MT-5TX-3SC							●			
1240990000	IE-SW-VL08MT-6TX-2ST								●		
1241020000	IE-SW-VL08MT-6TX-2SCS								●		
1241270000	IE-SW-VL08-8GT						8 GE				
1241280000	IE-SW-VL08-6GT-2GS								6 GE 2 GEC		
1241040000	IE-SW-PL08M-8TX					●					
1241070000	IE-SW-PL08M-6TX-2SC								●		
1241080000	IE-SW-PL08M-6TX-2ST								●		
1241090000	IE-SW-PL08M-6TX-2SCS								●		
1241100000	IE-SW-PL16M-16TX										
1241120000	IE-SW-PL16M-14TX-2SC										
1241130000	IE-SW-PL16M-14TX-2ST										
1241290000	IE-SW-PL10M-3GT-7TX										
1241300000	IE-SW-PL10M-1GT-2GS-7TX										
1241320000	IE-SW-PL18M-2GC-16TX										
1241330000	IE-SW-PL18M-2GC-14TX2SC										
1241340000	IE-SW-PL18M-2GC14TX2ST										
1241350000	IE-SW-PL18M-2GC14TX2SCS										
1241370000	IE-SW-PL09M-5GC-4GT										
Power over Ethernet Switches											
1241380000	IE-SW-BL06-2TX-4PoE					4 PoE+					
1241390000	IE-SW-PL06M-2TX-4PoE					4 PoE+					

FE = Fast Ethernet

GE = Gigabit Ethernet

GEC = Gigabit Ethernet Combo Ports

PoE+ = Power over Ethernet+

	9	10		16		18		Unmanaged	Managed			
	4	10	8	16	14	16	14			Temperature	Further characteristics	Page
			2		2		2					
	5					2	2					

Unmanaged Switches

B

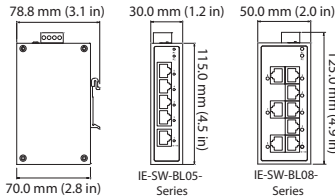
Switches are the basic coupling elements in Ethernet networks. They connect the Ethernet participants together. In an Ethernet network the communication basically originates from the participants. The switches connect the participants together and enable the communication. Unmanaged switches are the simplest active network component. They do not need to be configured and are therefore very flexible. They use the basic standard protocols like auto-negotiation, auto-crossing, and flow-control and can automatically adjust to the different transmission speeds or connector wiring.

Unmanaged switches are protocol transparent. Each port on the switch creates an individual collision domain. The use of twisted-pair cabling with an RJ45 interface or fibre-optic cable based on the IEEE 802.3 specification interfaces are supported by all Weidmüller switches.



Unmanaged Fast Ethernet Switches

- 10/100BaseT(X) (RJ45 connector), 100BaseFX (multi/singlemode, SC or ST connector)
- Redundant dual 12/24/48 V DC, 18 to 30 V AC power inputs
- IP30 aluminum housing
- Rugged hardware design well suited for hazardous locations (Class I Div. 2 /ATEX) and maritime environments (DNV/GL)
- -40 to 75 °C operating temperature range (T models)



Technical data

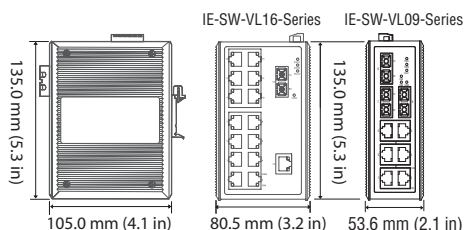
Technology		
Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) and 100BaseFX IEEE 802.3x for Flow Control	
Processing Type	Store and Forward	
Flow Control	IEEE 802.3x flow control, back pressure flow control	
Switch Properties		
MAC Table Size	1 K	
Packet Buffer Size	512 Kbit	
Interface		
Fiber Ports	100BaseFX ports (SC/ST connector, multimode, singlemode)	
RJ45 Ports	10/100BaseT(X) auto negotiation speed, Full/Half duplex mode, and auto MDI/MDI-X connection	
DIP Switches	Enable/Disable broadcast storm protection	
LED Indicators	Power, 10/100M (TP port), 100M (fiber port)	
Optical Fiber		
	100BaseFX	
	multimode	singlemode
Wavelength	1300 nm	1310 nm
Max. TX	-10 dBm	0 dBm
Min. TX	-20 dBm	-5 dBm
RX Sensitivity	-32 dBm	-34 dBm
Link Budget	12 dB	29 dB
Typical Distance	5 km (50/125 µm multimode cable) 4 km (62.5/125 µm multimode cable)	40 km (9/125 µm singlemode cable)
Saturation	-6 dBm	-3 dBm
Power Requirements		
Input Voltage	12/24/48 V DC (9.6 to 60 V DC), 18 to 30 V AC (47 to 63 Hz), redundant dual inputs	
Input Current	IE SW BL05 5TX: 0.1 A @ 24 V IE SW BL05 SC/ST/SCS: 0.11 A @ 24 V IE SW BL08 8TX: 0.13 A @ 24 V IE SW BL08 2SC/2ST: 0.22 A @ 24 V IE SW BL08 SCS: 0.17 A @ 24 V	
Overload Current Protection	1.1 A	
Connection	1 removable 4-contact terminal block	
Reverse Polarity Protection	Present	
Physical Characteristics		
Housing	Aluminum, IP30 protection	
Dimensions	IIE-SW-BL05-Series: 30 x 115 x 70 mm (1.18 x 4.52 x 2.76 in) IIE-SW-BL08-Series: 50 x 115 x 70 mm (1.96 x 4.52 x 2.76 in)	
Weight	IE-SW-BL05-5TX: 175 g IE-SW-BL08-8TX: 275 g	
Installation	DIN-Rail mounting	
Environmental Limits		
Operating Temperature	Standard Models: -10 to 60 °C (14 to 140 °F) Wide Temp. Models: -40 to 75 °C (-40 to 167 °F)	
Storage Temperature	-40 to 85 °C (-40 to 185 °F)	

Environmental Limits			
Ambient Relative Humidity	5 to 95 % (non-condensing)		
Regulatory Approvals			
Safety	UL508		
Hazardous Location	UL/cUL Class I, Division 2, Groups A, B, C and D; ATEX Zone 2, Ex nC IIC		
EMI	FCC Part 15, CISPR (EN55022) class A		
EMS	EN61000-4-2 (ESD), level 3; EN61000-4-3 (RS), level 3; EN61000-4-4 (EFT), level 3; EN61000-4-5 (Surge), level 3; EN61000-4-6 (CS), level 3; EN61000-4-8; EN61000-4-11		
Maritime	DNV, GL (IE-SW-BL05-4TX-1SCS/SC/ST: pending)		
Shock	IEC 60068-2-27		
Freefall	IEC 60068-2-32		
Vibration	IEC 60068-2-6		
MTBF (mean time between failures)			
Time	425,000 hrs		
Database	Telcordia (Bellcore), GB		
Warranty			
Warranty Period	5 years		
Ordering Information			
Port Variants	Model Type	Operating Temperature	Order No.
5 * RJ45	IE-SW-BL05-5TX	-10 to +60 °C	1240840000
	IE-SW-BL05T-5TX	-40 to +75 °C	1240850000
4 * RJ45, 1 * SC-Multimode	IE-SW-BL05-4TX-1SC ¹⁾	-10 to +60 °C	1240890000
4 * RJ45, 1 * ST-Multimode	IE-SW-BL05-4TX-1ST ¹⁾	-10 to +60 °C	1240880000
4 * RJ45, 1 * SC-Singlemode	IE-SW-BL05-4TX-1SCS ¹⁾	-10 to +60 °C	1240870000
8 * RJ45	IE-SW-BL08-8TX ¹⁾	-10 to +60 °C	1240900000
6 * RJ45, 2 * SC-Multimode	IE-SW-BL08-6TX-2SC	-10 to +60 °C	1240910000
	IE-SW-BL08T-6TX-2SC	-40 to +75 °C	1240920000
6 * RJ45, 2 * ST-Multimode	IE-SW-BL08-6TX-2ST ¹⁾	-10 to +60 °C	1240930000
7 * RJ45, 1 * SC-Singlemode	IE-SW-BL08-7TX-1SCS ¹⁾	-10 to +60 °C	1240950000
¹⁾ Model with extended operating temperature -40 to +75 °C on request			
Accessories			
	Model Type		Order No.
19" Rack Mounting Kit	RM-KIT		1241440000

Unmanaged Switches Fast Ethernet – Value Line

Unmanaged Fast Ethernet Switches

- Redundant dual 24 V DC power inputs
- Relay output warning for power failure and port break alarm
- Broadcast storm protection
- Transparent transmission of VLAN tagged packets
- -40 to 75 °C operating temperature range (T models)



Technical data

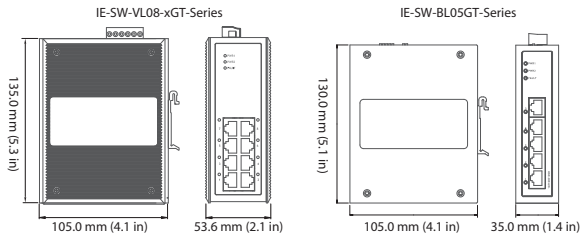
Technology	
Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) and 100BaseFX IEEE 802.3x for Flow Control
Processing Type	Store and Forward
Flow Control	IEEE 802.3x flow control, back pressure flow control
Switch Properties	
MAC Table Size	1 K (IE-SW-VL09...Series), 4 K (IE-SW-VL16...Series)
Packet Buffer Size	512 Kbit (IE-SW-VL09...Series), 1.5 Mbit (IE-SW-VL16...Series)
Interface	
Fiber Ports	100BaseFX ports (SC/ST connector)
RJ45 Ports	10/100BaseT(X) auto negotiation speed, Full/Half duplex mode, and auto MDI/MDI-X connection
DIP Switches	Port break alarm mask
LED Indicators	PWR1, PWR2, FAULT, 10/100M (TP port), 100M (fiber port)
Alarm Contact	1 relay output with current carrying capacity of 1 A @ 24 V DC
Optical Fiber	
	100BaseFX multimode
Wavelength	1300 nm
Max. TX	-10 dBm
Min. TX	-20 dBm
RX Sensitivity	-32 dBm
Link Budget	12 dB
Typical Distance	5 km (50/125 µm multimode cable) 4 km (62,5/125 µm multimode cable)
Saturation	-6 dBm
Power Requirements	
Input Voltage	IE-SW-VL09...16-Ports: 24 V DC (12 to 45 V DC), redundant dual inputs
Input Current	IE-SW-VL09T-6TX-3SC: 0.31 A @ 24 V IE-SW-VL16-16TX: 0.27 A @ 24 V IE-SW-VL16 SC/ST: 0.44 A @ 24 V
Power Requirements	
Overload Current Protection	IE-SW-VL09/16...Series: 1.6 A
Connection	1 removable 6-pin terminal blocks
Reverse Polarity Protection	Present
Physical Characteristics	
Housing	Metal, IP30 protection
Dimensions	IE-SW-VL09...Series: 53.6 x 135 x 105 mm (2.11 x 5.31 x 4.13 in) IE-SW-VL16...Series: 80.5 x 135 x 105 mm (3.16 x 5.31 x 4.13 in)
Weight	IE-SW-VL09: 630 g IE-SW-VL16: 1140g



Physical Characteristics					
Installation	DIN-Rail mounting				
Environmental Limits					
Operating Temperature	Standard Models: 0 to 60 °C (32 to 140 °F) Wide Temp. Models: -40 to 75 °C (-40 to 167 °F)				
Storage Temperature	-40 to 85 °C (-40 to 185 °F)				
Ambient Relative Humidity	5 to 95 % (non-condensing)				
Regulatory Approvals					
Safety	IE-SW-VL09...Series: UL508, UL60950-1, CSA C22.2 No. 60950-1, EN60950-1 IE-SW-VL16...Series: UL508, UL60950-1, EN60950-1				
Hazardous Location	UL/cUL Class I, Division 2, Groups A, B, C and D; ATEX Zone 2, Ex nC IIC				
EMI	FCC Part 15, CISPR (EN55022) class A				
EMS	EN61000-4-2 (ESD), level 3; EN61000-4-3 (RS), level 3; EN61000-4-4 (EFT), level 3; EN61000-4-5 (Surge), level 3; EN61000-4-6 (CS), level 3;				
Maritime	DNV, GL				
Shock	IEC 60068-2-27				
Freefall	IEC 60068-2-32				
Vibration	IEC 60068-2-6				
MTBF (mean time between failures)					
Time	IE-SW-VL09...Series: 396,000 hrs IE-SW-VL16...Series: 257,000 hrs				
Database	MIL-HDBK-217F, GB 25 °C				
Warranty					
Warranty Period	5 years				
Ordering Information					
Port Variants		Model Type	Operating Temperature	Order No.	
16 * RJ45		IE-SW-VL16-16TX ¹⁾	0 to 60 °C	1241000000	
6 * RJ45, 3 * SC-Multimode		IE-SW-VL09T-6TX-3SC	-40 to +75 °C	1240980000	
14 * RJ45, 2 * SC-Multimode		IE-SW-VL16-14TX-2SC ¹⁾	0 to 60 °C	1241030000	
14 * RJ45, 2 * ST-Multimode		IE-SW-VL16-14TX-2ST ¹⁾	0 to 60 °C	1241050000	
¹⁾ Model with extended operating temperature -40 to +75 °C on request					
Accessories					
Model Type			Order No.		
19" Rack Mounting Kit			RM-KIT		1241440000

Unmanaged Gigabit Ethernet Switches

- Fibre-optic options for extending distance and electrical noise immunity
- Redundant dual 12/24/48 V DC power inputs
- Relay output warning for power failure and port break alarm
- Broadcast storm protection
- Supports jumbo frame transmission (up to 9.6 KB)



Technical data

Technology	
Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) and 100BaseFX IEEE 802.3ab for 1000BaseT(X) IEEE 802.3z for 1000BaseX IEEE 802.3x for Flow Control
Processing Type	Store and Forward
Flow Control	IEEE 802.3x flow control, back pressure flow control
Switch Properties	
MAC Table Size	8 K
Packet Buffer Size	1088 Kbit (IE-SW-BL05-5GT), 1408 Kbit (IE-SW-VL08-xGT)
Interface	
Fiber Ports	100/1000BaseSFP slot (IE-SW-VL08-6GT-2GS)
RJ45 Ports	10/100/1000BaseT(X) auto negotiation speed, Full/Half duplex mode, and auto MDI/MDI-X connection
DIP Switches	One for port break alarm, one for Enable/Disable broadcast storm protection
LED Indicators	PWR1, PWR2, FAULT, 10/100/1000M
Alarm Contact	1 relay output with current carrying capacity of 1 A @ 24 V DC
Power Requirements	
Input Voltage	12/24/48 V DC (9.6 to 60 V DC), redundant dual inputs
Input Current	IE-SW-BL05-5GT: 0.20 A @ 24 V IE-SW-VL08-8GT: 0.32 A @ 24 V IE-SW-VL08-6GT-2GS: 0.34 A @ 24 V
Connection	1 removable 6-contact terminal block
Reverse Polarity Protection	Present
Physical Characteristics	
Housing	Metal, IP30 protection
Dimensions	IE-SW-BL05-5GT: 35 x 130 x 105 mm (1.37 x 5.12 x 4.13 in) IE-SW-VL08-xGT: 53.6 x 135 x 105 mm (2.11 x 5.31 x 4.13 in)
Weight	IE-SW-BL05-5GT: 290 g IE-SW-VL08-xGT: 630 g
Installation	DIN-Rail mounting
Environmental Limits	
Operating Temperature	Standard Models: 0 to 60 °C (32 to 140 °F) Wide Temp. Models: -40 to 75 °C (-40 to 167 °F) (on request)
Storage Temperature	-40 to 85 °C (-40 to 185 °F)
Ambient Relative Humidity	5 to 95 % (non-condensing)
Regulatory Approvals	
Safety	UL508
Hazardous Location	UL/cUL Class I, Division 2, Groups A, B, C, and D; ATEX Zone 2, Ex nC IIC
EMI	FCC Part 15, CISPR (EN55022) class A

Regulatory Approvals			
EMS	EN61000-4-2 (ESD), level 3; EN61000-4-3 (RS), level 3; EN61000-4-4 (EFT), level 3; EN61000-4-5 (Surge), level 3; EN61000-4-6 (CS), level 3		
Maritime	DNV, GL		
Shock	IEC 60068-2-27		
Freefall	IEC 60068-2-32		
Vibration	IEC 60068-2-6		
MTBF (mean time between failures)			
Time	325,000 hrs (IE-SW-VL08-xGT series)		
Database	Telcordia (Bellcore), GB (IE-SW-VL08-xGT series)		
Warranty			
Warranty Period	5 years		
Ordering Information			
Port Variants	Model Type	Operating Temperature	Order No.
5 * RJ45 10/100/1000BaseT(X)	IE-SW-BL05-5GT	0 to 60 °C	1241250000
8 * RJ45 10/100/1000BaseT(X)	IE-SW-VL08-8GT	0 to 60 °C	1241270000
6 * RJ45 10/100/1000BaseT(X), 2 Combo Ports (10/100/1000 BaseT(X) or 100/1000BaseSFP)	IE-SW-VL08-6GT-2GS	0 to 60 °C	1241280000
Models with extended operating temperature -40 to +75 °C on request			
Accessories			
	Model Type		Order No.
19" Rack Mounting Kit	RM-KIT		1241440000

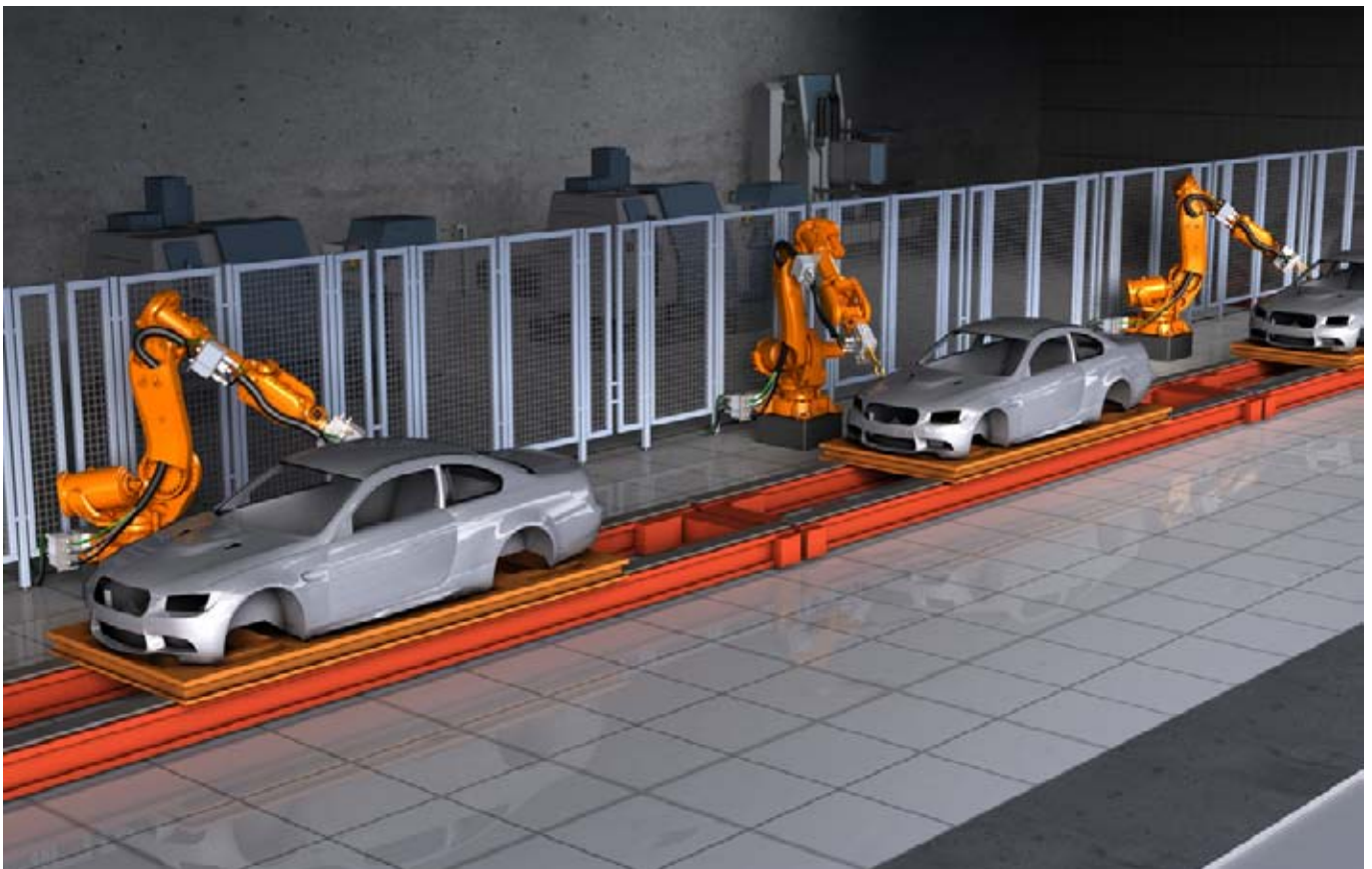
Managed Switches

B

Managed switches offer extensive control mechanisms for data distribution and bandwidth management to coordinate and cope with the different requirements of communication participants in an industrial network. Configuration is either web-based using a simple and intuitive user interface, or using convenient management software in large networks with multiple switches, this could be Weidmüller's Net-Manager software for example.

Powerful and reliable network redundancy

It is particularly important to have network redundancy to ensure system availability in today's industrial Ethernet infrastructures. This is because in a highly integrated system a connection error can lead to machine stoppage and thus to production losses. To minimise such risks in a managed Ethernet network Weidmüller has integrated high-performance redundancy mechanisms into its managed switches, this is in addition to the RSTP/STP standard and port-trunking.



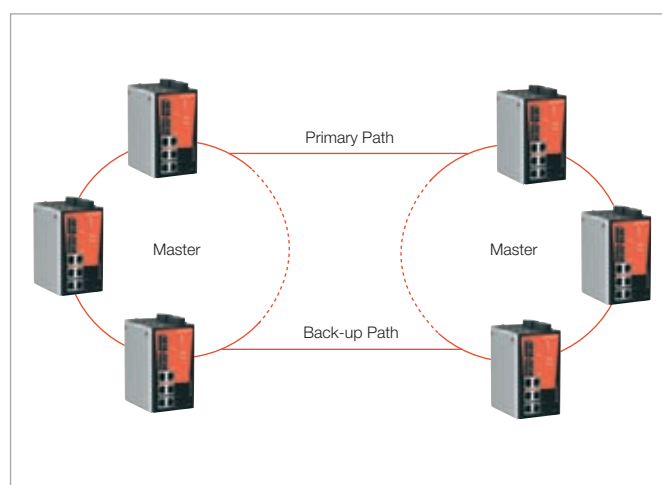
Ring redundancy

The Turbo-Ring technology integrated into Weidmüller's switches allows you to restore a network connection in case of failure in under 20 ms, and this with up to 250 switches in a ring. Turbo-Ring offers three different topology options (Ring-Coupling, Dual-Ring and Dual-Homing) for different application requirements to ensure the maximum possible availability of industrial network applications.



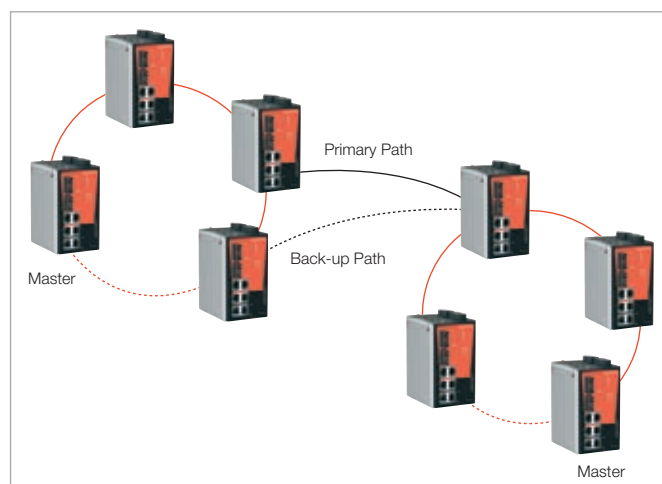
Ring-Coupling

In some applications it is not sensible to have all equipment and devices in a single large redundant ring networked together as some of the devices may be located in remote parts of the plant. For such structures Ring-Coupling is ideal. It connects devices in multiple, smaller rings that are connected redundantly and directly with one another.



Dual-Homing

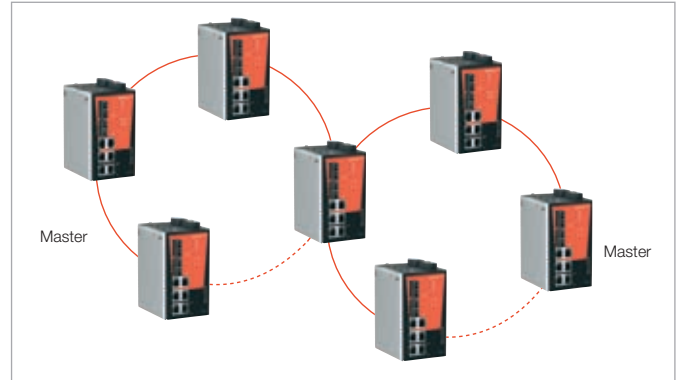
Two separate rings are connected through one managed switch via two independent connection points. The back-up connection is activated if the primary connection fails.



Managed Switches

Dual-Ring

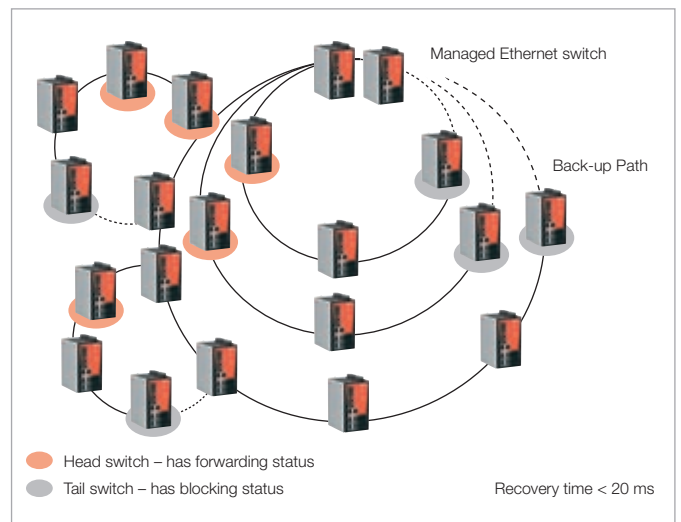
In Dual-Ring two neighbouring rings are connected with one another using one switch without the need for additional ports or cabling. This configuration reduces the total number of ports and saves cabling costs as an additional primary and back-up line is not needed.



Turbo-Chain

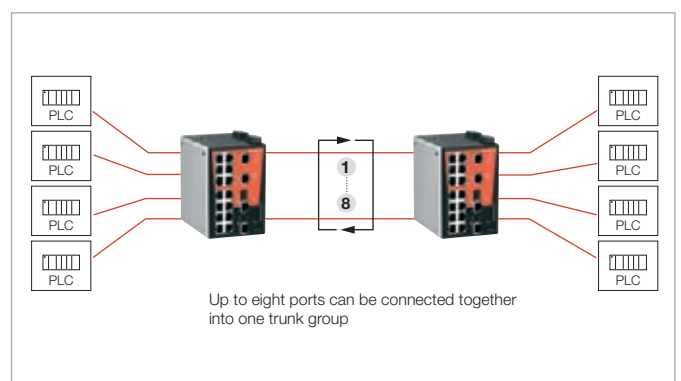
Turbo-Chain offers the possibility of creating multiple redundant networks without the limitations of the ring technology. Turbo-Chain can be simply configured by defining two end-points in a segment. This means you can connect or extend existing redundant networks. When compared with traditional ring coupling or a network re-design, Turbo-Chain is more flexible as well as being more cost efficient and it has significant savings potential when compared to the effort for network restructuring and re-cabling. It also supports the Turbo-Chain standard IEEE 802.1w / D RSTP and STP protocols.

- Flexible network topology
- Unlimited and simple network expansion
- Quick troubleshooting (recovery time < 20 ms)
- Cost-effective configurations



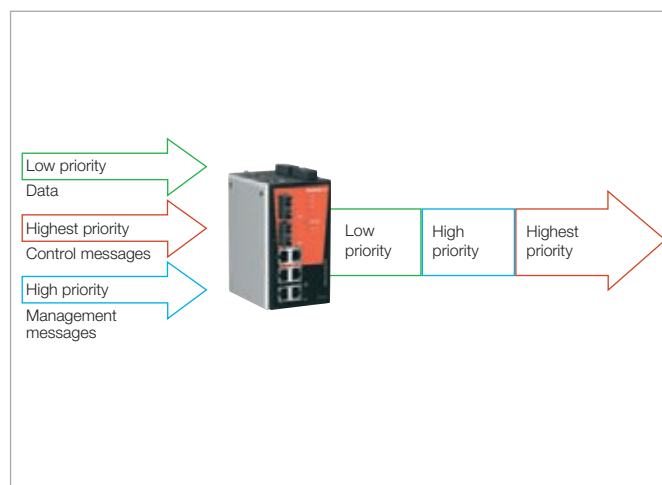
Port trunking for flexible connections

IEEE 802.3ad (LACP, Link Aggregation Control Protocol) permits flexible network connections and a redundant path for critical applications. It provides the possibility to give the user a link with higher bandwidth over the PremiumLine managed switches by combining more ports into a trunk group.



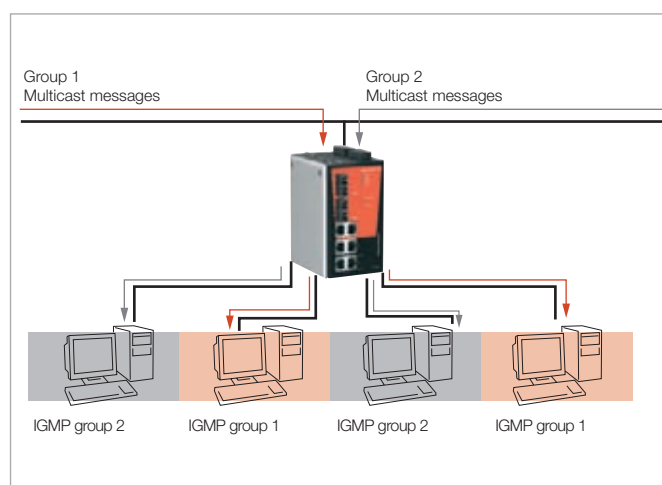
QoS supports real-time capability

Quality of Service (QoS) offers the possibility of prioritising data traffic in a network and ensures that important data are consistently and predictably available. Weidmüller managed switches can deal with IEEE 802.1p/1Q layer 2 CoS tags and also layer 3 TOS information. The QoS functionality of Weidmüller's managed switches improves network performance and ensures that time-critical applications are given priority communications.



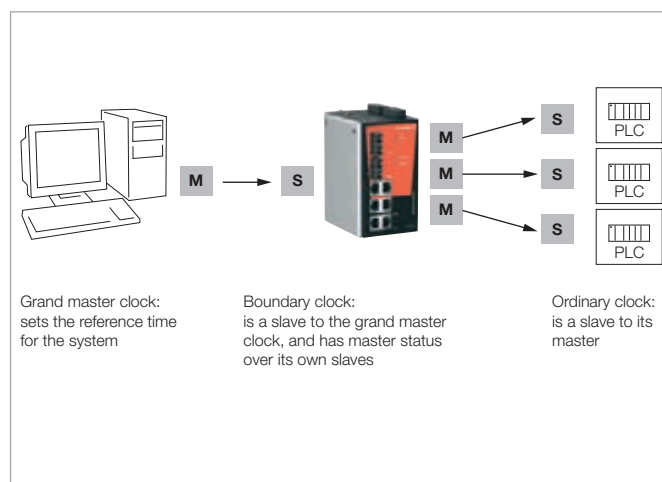
IGMP snooping and GMRP for filtering multicast data traffic

Weidmüller managed switches support GMRP (Generic Multicast Registration Protocol) and IGMP snooping. These protocols limit multicast data traffic so that it is only forwarded to the devices that actually require it. This reduces unnecessary network data traffic.



IEEE 1588 PTP - improves time synchronisation of automation devices

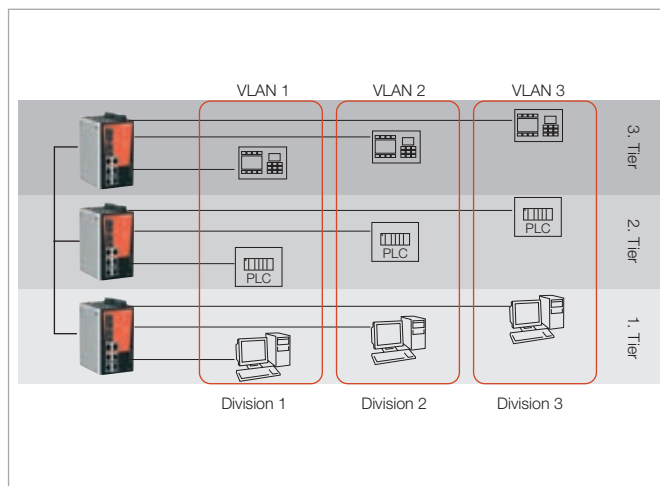
IEEE 1588 PTP, also known as Precision Time Protocol (PTP), was developed to synchronise real-time clocks which are located at specific nodes of a distributed system. Weidmüller managed switches with IEEE 1588 PTP are particularly suited for motion control applications where distributed clocks must be synchronised with high levels of accuracy.



Managed Switches

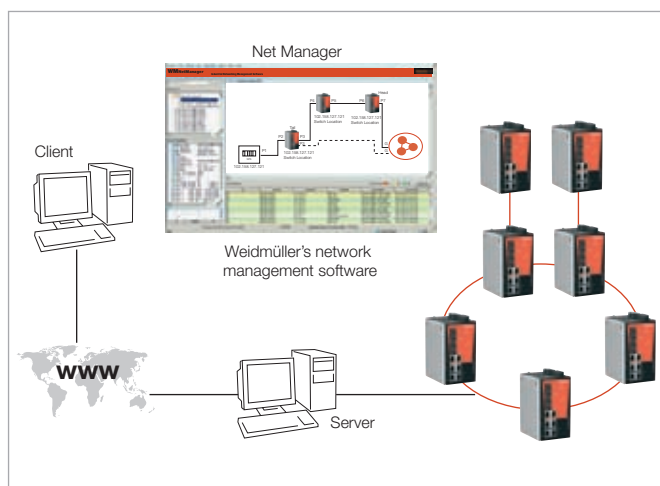
VLAN – simplifies network planning

VLAN stands for virtual LAN. It is a network structure with all the characteristics of a normal LAN, but not geographically constrained. A network can be divided into different sections using the VLAN function. It is possible, for example, to group servers or workstations together based on their function. Data will only then be sent to Ethernet devices of a specific VLAN group. The possibility to isolate VLANs completely from one another serves to increase the security of data transfer and offers additional protection from unauthorised access or unauthorised data traffic.



Automatic topology detection using LLDP

The Link Layer Discovery Protocol (LLDP - IEEE 802.1AB) is a data link layer protocol which publishes information about a device containing its IP address, description and functional information to its neighbouring devices over the network. All of Weidmüller's managed switches fully support LLDP. Using Weidmüller's Net-Manager network management software LLDP capable devices are detected and managed. The information is used by the system to automatically generate accurate network topologies and to provide information about the connected devices.



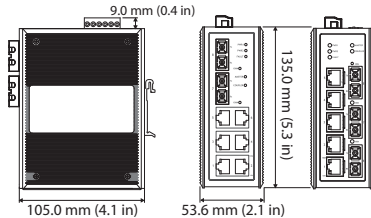
Simple browser based configuration

Weidmüller's managed switches can be easily configured using a web browser, telnet console or the Weidmüller switch configuration utility. Further switch configurations can be saved or the firmware updated using this user-friendly tool.



Managed Entry-level Ethernet Switches

- Turbo Ring and Turbo Chain with fast recovery time (under 20 ms)
- QoS, port-based VLAN, SNMPv1/v2c/v3, RMON supported
- Automatic warning by exception through e-mail, relay output
- User-friendly web-based configuration and management
- External Backup and Restoring Module for easy system reconfiguration (optional accessory)



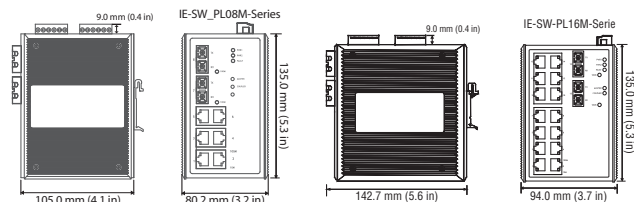
Technical data

Technology		
Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) and 100BaseFX IEEE 802.3x for Flow Control IEEE 802.1D for Spanning Tree Protocol IEEE 802.1w for Rapid STP IEEE 802.1p for Class of Service IEEE 802.1Q for VLAN Tagging	
Protocols	IGMPv1/v2, GMRP, GVRP, SNMPv1/v2c/v3, DHCP Server/Client, TFTP, SNMP, SMTP, RARP, RMON, HTTP, Telnet, Syslog, DHCP Option 66/67/82, BootP, LLDP, Modbus/TCP, IPv6	
MIB	MIB-II, Ethernet-Like MIB, P-BRIDGE MIB, Bridge MIB, RSTP MIB, RMON MIB Group 1, 2, 3, 9	
Flow Control	IEEE 802.3x flow control, back pressure flow control	
Switch Properties		
MAC Table Size	8 K	
Packet Buffer Size	1 Mbit	
Interface		
Fiber Ports	100BaseFX ports (SC/ST connector)	
RJ45 Ports	10/100BaseT(X) auto negotiation speed, Full/Half duplex mode, and auto MDI/MDI-X connection	
Console Port	RS-232 (RJ45 connector)	
DIP Switches	Turbo Ring, Master, Coupler, Reserve	
LED Indicators	PWR1, PWR2, FAULT, MSTR/HEAD, CPLR/ TAIL, 10/100M	
Alarm Contact	1 relay output with current carrying capacity of 1 A @ 24 V DC	
Optical Fiber		
	100BaseFX	
	multimode	singlemode
Wavelength	1300 nm	1310 nm
Max. TX	-10 dBm	0 dBm
Min. TX	-20 dBm	-5 dBm
RX Sensitivity	-32 dBm	-34 dBm
Link Budget	12 dB	29 dB
Typical Distance	5 km ^a	40 km ^c
	4 km ^b	
Saturation	-6 dBm	-3 dBm
^a 50/125 µm, 800 MHz*km fiber optic cable		
^b 62.5/125 µm, 500 MHz*km fiber optic cable		
^c 9/125 µm singlemode fiber optic cable		
Power Requirements		
Input Voltage	24 V DC (12 to 45 V DC), redundant dual inputs	
Input Current	IE-SW-VL08M-8TX: 0.26 A @ 24 V IE-SW-VL08M-6TX-2ST/SC: 0.35 A @ 24 V IE-SW-VL08M-5TX-3SC: 0.32 A @ 24 V	

Power Requirements			
Overload Current Protection	Present		
Connection	1 removable 6-contact terminal block		
Reverse Polarity Protection	Present		
Physical Characteristics			
Housing	Metal, IP30 protection		
Dimensions	53.6 x 135 x 105 mm (2.11 x 5.31 x 4.13 in)		
Weight	IE-SW-VL08M-...8TX/6TX-2SC/6TX-2ST: 650 g IE-SW-VL08M-5TX-3SC: 890 g		
Installation	DIN-Rail mounting		
Environmental Limits			
Operating Temperature	-40 to 75 °C (-40 to 167 °F)		
Storage Temperature	-40 to 85 °C (-40 to 185 °F)		
Ambient Relative Humidity	5 to 95 % (non-condensing)		
Regulatory Approvals			
Safety	UL508, UL60950-1, CSA C22.2 No. 60950-1, EN60950-1		
Hazardous Location	UL/cUL Class I, Division 2, Groups A, B, C, and D (IE-SW-VL08M-5TX-3SC Pending); ATEX Zone 2, Ex nC IIC (IE-SW-VL08M-5TX-3SC Pending)		
EMI	FCC Part 15, CISPR (EN55022) class A		
EMS	EN61000-4-2 (ESD), level 3; EN61000-4-3 (RS), level 3; EN61000-4-4 (EFT), level 3; EN61000-4-5 (Surge), level 3; EN61000-4-6 (CS), level 3; EN61000-4-8		
Maritime	DNV, GL		
Shock	IEC 60068-2-27		
Freefall	IEC 60068-2-32		
Vibration	IEC 60068-2-6		
MTBF (mean time between failures)			
Time	IE-SW-VL08M-...Series: 363,000 hrs		
Database	Telcordia (Bellcore), GB		
Warranty			
Warranty Period	5 years		
Ordering Information			
Port Variants	Model Type	Operating Temperature	Order No.
8 * RJ45	IE-SW-VL08MT-8TX	-40 to +75 °C	1240940000
5 * RJ45, 3 * SC-Multimode	IE-SW-VL08MT-5TX-3SC	-40 to +75 °C	1240970000
6 * RJ45, 2 * ST-Multimode	IE-SW-VL08MT-6TX-2ST	-40 to +75 °C	1240990000
6 * RJ45, 2 * SC-Singlemode	IE-SW-VL08MT-6TX-2SCS	-40 to +75 °C	1241020000
Accessories			
	Model Type	Order No.	
External Backup and Restore Module	EBR-Module RS232	1241430000	
Networkmanagement Software	IE-NM-WMNETMANAGER	1242120000	
19" Rack Mounting Kit	RM-KIT	1241440000	

Managed Fast Ethernet Switches

- Plug-n-play Turbo Ring and Turbo Chain (recovery time < 20 ms), RSTP/STP (IEEE 802.1w/D) for Ethernet redundancy
- IEEE 1588 PTP, Modbus/TCP, LLDP, SNMP Inform, QoS, IGMP snooping, VLAN, IEEE 802.1X, HTTPS, SNMPv3, and SSH supported
- EBR-Module (External Backup and Restore Module) for system configuration backup (optional accessory)



Technical data

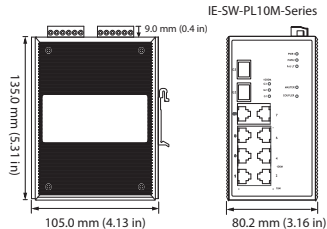
Technology		
Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) and 100BaseFX IEEE 802.3x for Flow Control IEEE 802.1D for Spanning Tree Protocol IEEE 802.1w for Rapid STP IEEE 802.1Q for VLAN Tagging IEEE 802.1p for Class of Service IEEE 802.1X for Authentication IEEE 802.3ad for Port Trunk with LACP	
Protocols	IGMPv1/v2, GVRP, SNMPv1/v2c/v3, DHCP Server/Client, BootP, TFTP, SNMP, SMTP, RARP, GMRP, LACP, RMON, HTTP, HTTPS, Telnet, Syslog, DHCP Option 66/67/82, SSH, SNMP Inform, Modbus/TCP, LLDP, IEEE 1588 PTP, IPv6	
MIB	MIB-II, Ethernet-Like MIB, P-BRIDGE MIB, Q-BRIDGE MIB, Bridge MIB, RSTP MIB, RMON MIB Group 1, 2, 3, 9	
Flow Control	IEEE 802.3x flow control, back pressure flow control	
Switch Properties		
Priority Queues	4	
Max. Number of Available VLANs	64	
VLAN ID Range	VID 1 to 4094	
IGMP Groups	256	
MAC Table Size	8 K	
Packet Buffer Size	1 Mbit (E-SW-PL08M) 2 Mbit (E-SW-PL16M)	
Interface		
Fiber Ports	100BaseFX ports (SC/ST connector)	
RJ45 Ports	10/100BaseT(X) auto negotiation speed, Full/Half duplex mode, and auto MDI/MDI-X connection	
Console Port	RS-232 (RJ45 connector)	
DIP Switches	Turbo Ring, Master, Coupler, Reserve	
LED Indicators	PWR1, PWR2, FAULT, MSTR/HEAD, CPLR/TAIL, 10/100M	
Alarm Contact	2 relay outputs with current carrying capacity of 1 A @ 24 V DC	
Digital Inputs	2 inputs with the same ground, electrically isolated • +13 to +30 V for state "1" • -30 to +3 V for state "0" • Max. input current: 8 mA	
Optical Fiber		
	100BaseFX	
	multimode	singlemode
Wavelength	1300 nm	1310 nm
Max. TX	-10 dBm	0 dBm
Min. TX	-20 dBm	-5 dBm
RX Sensitivity	-32 dBm	-34 dBm
Link Budget	12 dB	29 dB
Typical Distance	5 km (50/125 μm multimode cable) 4 km (62.5/125 μm multimode cable)	40 km (9/125 μm singlemode cable)
Saturation	-6 dBm	-3 dBm



Power Requirements			
Input Voltage	24 V DC (12 to 45 V DC), redundant dual inputs		
Input Current	IE-SW-PL08M-8TX: 0.26 A @ 24 V IE-SW-PL08M-6TX-2SC/ST/2SCS: 0.36 A @ 24 V IE-SW-PL16M-16TX: 0.41 A @ 24 V IE-SW-PL16M-14TX-2SC/ST: 0.51 A @ 24 V		
Overload Current Protection	Present		
Connection	2 removable 6-contact terminal blocks		
Reverse Polarity Protection	Present		
Physical Characteristics			
Housing	Metal, IP30 protection		
Dimensions	IE-SW-PL08M: 80.2 x 135 x 105 mm (3.16 x 5.31 x 4.13 in) IE-SW-PL16M: 94 x 135 x 142.7 mm (3.7 x 5.31 x 5.62 in)		
Weight	IE-SW-PL08M: 1040 g IE-SW-PL16M: 1586 g		
Installation	DIN-Rail mounting		
Environmental Limits			
Operating Temperature	Standard Models: 0 to 60 °C (32 to 140 °F) Wide Temp. Models: -40 to 75 °C (-40 to 167 °F) (on request)		
Storage Temperature	-40 to 85 °C (-40 to 185 °F)		
Ambient Relative Humidity	5 to 95 % (non-condensing)		
Regulatory Approvals			
Safety	UL508, UL60950-1, CSA C22.2 No. 60950-1, EN60950-1		
Hazardous Location	UL/cUL Class I, Division 2, Groups A, B, C, and D; ATEX Zone 2, Ex nC IIC		
EMI	FCC Part 15, CISPR (EN55022) class A		
EMS	EN61000-4-2 (ESD): IE-SW-PL08M...Series: level 3 IE-SW-PL16M...Series: level 2; EN61000-4-3 (RS) level 3; EN61000-4-4 (EFT) level 2; EN61000-4-5 (Surge) level 3; EN61000-4-6 (CS) level 3; EN61000-4-8		
Maritime	DNV, GL		
Shock	IEC 60068-2-27		
Freefall	IEC 60068-2-32		
Vibration	IEC 60068-2-6		
MTBF (mean time between failures)			
Time	IE-SW-PL08M...Series: 339,000 hrs IE-SW-PL16M...Series: 247,000 hrs		
Database	Telcordia (Bellcore), GB		
Warranty			
Warranty Period	5 years		
Ordering Information			
Port Variants	Model Type	Operating Temperature	Order No.
8 * RJ45	IE-SW-PL08M-8TX	0 to 60 °C	1241040000
6 * RJ45, 2 * SC-Multimode	IE-SW-PL08M-6TX-2SC	0 to 60 °C	1241070000
6 * RJ45, 2 * ST-Multimode	IE-SW-PL08M-6TX-2ST	0 to 60 °C	1241080000
6 * RJ45, 2 * SC-Singlemode	IE-SW-PL08M-6TX-2SCS	0 to 60 °C	1241090000
16 * RJ45	IE-SW-PL16M-16TX	0 to 60 °C	1241100000
14 * RJ45, 2 * SC-Multimode	IE-SW-PL16M-14TX-2SC	0 to 60 °C	1241120000
14 * RJ45, 2 * ST-Multimode	IE-SW-PL16M-14TX-2ST	0 to 60 °C	1241130000
Note: Models with extended operating temperature -40 to +75 °C on request			

Managed Gigabit Ethernet Switches

- 2 Gigabit Ethernet ports for redundant ring and 1 Gigabit Ethernet port for uplink solution
- Turbo Ring, Turbo Chain, and RSTP/STP for network redundancy
- IEEE 1588 PTP, Modbus/TCP, LLDP, SNMP Inform, QoS, IGMP snooping, VLAN, IEEE 802.1X, HTTPS, SNMPv3, and SSH supported
- EBR-Module - External Backup and Restoring Module for easy system reconfiguration (optional accessory)



Technical data

Technology	
Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) and 100BaseFX IEEE 802.3ab for 1000BaseT(X) IEEE 802.3z for 1000BaseX IEEE 802.3x for Flow Control IEEE 802.1D for Spanning Tree Protocol IEEE 802.1w for Rapid STP IEEE 802.1Q for VLAN Tagging IEEE 802.1p for Class of Service IEEE 802.1X for Authentication IEEE 802.3ad for Port Trunk with LACP
Protocols	
IGMPv1/v2 • GMRP • GVRP • SNMPv1/v2c/v3 • DHCP Server/Client • BootP • TFTP • STP • SMTP • RARP • RMON • HTTP • HTTPS • Telnet • Syslog • DHCP Option 66/67/82 • SSH • SNMP Inform • Modbus/TCP • LLDP • IEEE 1588 PTP • IPv6	
MIB	
MIB-II • Ethernet-Like MIB • P-BRIDGE MIB • Q-BRIDGE MIB • Bridge MIB • RSTP MIB • RMON MIB Group 1, 2, 3, 9	
Flow Control	IEEE 802.3x flow control, back pressure flow control
Switch Properties	
Priority Queues	4
Max. Number of Available VLANs	64
VLAN ID Range	VID 1 to 4094
IGMP Groups	256
MAC Table Size	8 K
Packet Buffer Size	1 Mbit
Interface	
Fiber Ports	1000BaseSFP slot
RJ45 Ports	10/100BaseT(X) or 10/100/1000BaseT(X) auto negotiation speed
Console Port	RS-232 (RJ45 connector)
DIP Switches	Turbo Ring, Master, Coupler, Reserve
LED Indicators	PWR1, PWR2, FAULT, 10/100M (TP port), 1000M (Gigabit port), MSTR/HEAD, CPLR/TAIL
Alarm Contact	2 relay outputs with current carrying capacity of 1 A @ 24 V DC
Digital Inputs	2 inputs with the same ground, but electrically isolated from the electronics. • +13 to +30 V for state "1" • -30 to +3 V for state "0" • Max. input current: 8 mA
Power Requirements	
Input Voltage	24 V DC (12 to 45 V DC), redundant dual inputs
Input Current	IE-SW-PL10M-3GT-7TX: 0.65 A @ 24 V IE-SW-PL10M-1GT-2GS-7TX: 0.44 A @ 24 V
Overload Current Protection	Present
Connection	2 removable 6-contact terminal blocks
Reverse Polarity Protection	Present

Physical Characteristics	
Housing	Metal, IP30 protection
Dimensions	80.2 x 135 x 105 mm (3.16 x 5.31 x 4.13 in)
Weight	1170 g
Installation	DIN-Rail mounting
Environmental Limits	
Operating Temperature	Standard Models: 0 to 60 °C (32 to 140 °F) Wide Temp. Models: -40 to 75 °C (-40 to 167 °F) on request
Storage Temperature	-40 to 85 °C (-40 to 185 °F)
Ambient Relative Humidity	5 to 95 % (non-condensing)
Regulatory Approvals	
Safety	UL508, UL60950-1, CSA C22.2 No. 60950-1, EN60950-1
Hazardous Location	UL/cUL Class I, Division 2, Groups A, B, C, and D; ATEX Zone 2, Ex nC IIC
EMI	FCC Part 15, CISPR (EN55022) class A
EMS	EN61000-4-2 (ESD), level 3; EN61000-4-3 (RS), level 3; EN61000-4-4 (EFT), level 3; EN61000-4-5 (Surge), level 3; EN61000-4-6 (CS), level 3; EN61000-4-8
Maritime	DNV, GL
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6
MTBF (meantime between failures)	
Time	204,000 hrs
Database	MIL-HDBK-217J, GB 25 °C
Warranty	
Warranty Period	5 years

Ordering Information			
Port Variants	Model Type	Operating Temperature	Order No.
3 * RJ45 10/100/1000BaseT(X), 7 * RJ45 10/100BaseT(X)	IE-SW-PL10M-3GT-7TX	0 to 60 °C	1241290000
1 * RJ45 10/100/1000BaseT(X), 2 * Slots 1000BaseSFP, 7 * RJ45 10/100BaseT(X)	IE-SW-PL10M-1GT-2GS-7TX	0 to 60 °C	1241300000

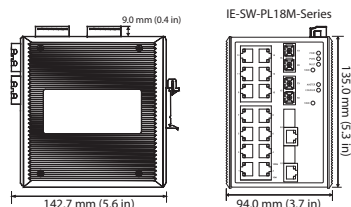
Note: Models with extended operating temperature -40 to +75 °C on request

Accessories		
	Model Type	Order No.
External Backup and Restore Module	EBR-Module RS232	1241430000
Networkmanagement Software	IE-NM-WMNETMANAGER	1242120000
19" Rack Mounting Kit	RM-KIT	1241440000

Managed Switches Gigabit Ethernet – Premium Line

Managed Gigabit Ethernet Switches

- 2 Gigabit Ethernet ports plus 16 Fast Ethernet ports for copper and fibre
- Turbo Ring, Turbo Chain, and RSTP/STP for network redundancy
- IEEE 1588 PTP, Modbus/TCP, LLDP, SNMP Inform, QoS, IGMP snooping, VLAN, IEEE 802.1X, HTTPS, SNMPv3, and SSH supported
- EBR-Module - External Backup and Restoring Module for easy system reconfiguration (optional accessory)



Technical data

Technology Standards		
IEEE 802.3 for 10BaseT ■ IEEE 802.3u for 100BaseT(X) and 100BaseFX ■ IEEE 802.3ab for 1000BaseT(X) ■ IEEE 802.3z for 1000BaseX IEEE 802.3x for Flow Control ■ IEEE 802.1D for Spanning Tree Protocol ■ IEEE 802.1w for Rapid STP ■ IEEE 802.1Q for VLAN Tagging ■ IEEE 802.1p for Class of Service ■ IEEE 802.1X for Authentication ■ IEEE 802.3ad for Port Trunk with LACP		
Protocols		
IGMPv1/v2 ■ GMRP, GVRP ■ SNMPv1/v2c/v3 ■ DHCP Server/Client ■ BootP ■ TFTP ■ SNMP ■ SMTP ■ RARP ■ RMON ■ HTTP ■ HTTPS ■ Telnet ■ Syslog ■ DHCP Option 66/67/82 ■ SSH ■ SNMP Inform ■ Modbus/TCP ■ LLDP ■ IEEE 1588 PTP ■ IPv6		
MIB		
MIB-II ■ Ethernet-Like MIB ■ P-BRIDGE MIB ■ Q-BRIDGE MIB ■ Bridge MIB ■ RSTP MIB ■ RMON MIB Group 1, 2, 3, 9		
Flow Control		
IEEE 802.3x flow control, back pressure flow control		
Switch Properties		
Priority Queues	4	
Max. Number of Available VLANs	64	
VLAN ID Range	VID 1 to 4094	
IGMP Groups	256	
MAC Table Size	8 K	
Packet Buffer Size	2 Mbit	
Interface		
Fiber Ports	100BaseFX (SC/ST connector) and 1000BaseSFP slot	
RJ45 Ports	10/100BaseT(X) or 10/100/1000BaseT(X) auto negotiation speed	
Console Port	RS-232 (RJ45 connector)	
LED Indicators	PWR1, PWR2, FAULT, 10/100M (TP port), 100M (fiber port), MSTR/HEAD, CPLR/TAIL	
Alarm Contact	2 relay outputs with current carrying capacity of 1 A @ 24 V DC	
Digital Inputs	2 inputs with the same ground, but electrically isolated from the electronics. • +13 to +30 V for state "1" • -30 to +3 V for state "0" • Max. input current: 8 mA	
Optical Fiber		
	100BaseFX	
	multimode	singlemode
Wavelength	1300 nm	1310 nm
Max. TX	-10 dBm	0 dBm
Min. TX	-20 dBm	-5 dBm
RX Sensitivity	-32 dBm	-34 dBm
Link Budget	12 dB	29 dB
Typical Distance	5 km (50/125 µm multimode cable) 4 km (62,5/125 µm multimode cable)	40 km (9/125 µm singlemode cable)
Saturation	-6 dBm	-3 dBm

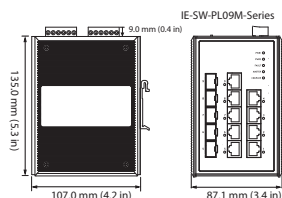
Power Requirements				
Input Voltage	24 V DC (12 to 45 V DC), redundant dual inputs			
Input Current	IE-SW-PL18M-2GC-16TX: 0.51 A @ 24 V IE-SW-PL18M-SC/ST/SCS: 0.61 A @ 24 V			
Overload Current Protection	Present			
Connection	2 removable 6-contact terminal blocks			
Reverse Polarity Protection	Present			
Physical Characteristics				
Housing	Metal, IP30 protection			
Dimensions	94 x 135 x 142.7 mm (3.7 x 5.31 x 5.62 in)			
Weight	1630 g			
Installation	DIN-Rail mounting			
Environmental Limits				
Operating Temperature	Standard Models: 0 to 60 °C (32 to 140 °F) Wide Temp. Models: -40 to 75 °C (-40 to 167 °F) on request			
Storage Temperature	-40 to 85 °C (-40 to 185 °F)			
Ambient Relative Humidity	5 to 95 % (non-condensing)			
Regulatory Approvals				
Safety	UL508, UL60950-1, CSA C22.2 No. 60950-1, EN60950-1			
Hazardous Location	UL/cUL Class I, Division 2, Groups A, B, C, and D; ATEX Zone 2, Ex nC IIC			
EMI	FCC Part 15, CISPR (EN55022) class A			
EMS	EN61000-4-2 (ESD), level 2; EN61000-4-3 (RS), level 3; EN61000-4-4 (EFT), level 2; EN61000-4-5 (Surge), level 3; EN61000-4-6 (CS), level 3; EN61000-4-8; EN61000-4-12			
Maritime	DNV, GL			
Shock	IEC 60068-2-27			
Freefall	IEC 60068-2-32			
Vibration	IEC 60068-2-6			
MTBF (mean time between failures)				
Time	240,000 hrs			
Database	Telcordia (Bellcore), GB			
Warranty				
Warranty Period	5 years			
Ordering Information				
Port Variants		Model Type	Operating Temperature	Order No.
16 * RJ45 10/100BaseT(X), 2 * Combo Ports ¹		IE-SW-PL18M-2GC-16TX	0 to +60 °C	1241320000
14 * RJ45 10/100BaseT(X), 2 * SC-Multimode 100FX, 2 * Combo Ports ¹		IE-SW-PL18M-2GC14TX2SC	0 to +60 °C	1241330000
14 * RJ45 10/100BaseT(X), 2 * ST-Multimode 100FX, 2 * Combo Ports ¹		IE-SW-PL18M-2GC14TX2ST	0 to +60 °C	1241340000
14 * RJ45 10/100BaseT(X), 2 * SC-Singlemode 100FX, 2 * Combo Ports ¹		IE-SW-PL18M-2GC14TX2SCS	0 to +60 °C	1241350000
Models with extended operating temperature -40 to +75 °C on request				

Models with extended operating temperature -40 to +75 °C on request

¹ (10/100/1000BaseT(X) or 100/1000BaseSFP)

Managed Full Gigabit Ethernet Switch

- 4 10/100/1000BaseT(X) ports plus 5 combo (10/100/1000BaseT(X) or 100/1000BaseSFP slot) Gigabit ports
- Turbo Ring, Turbo Chain, and RSTP/STP for network redundancy
- IEEE 1588 PTP, Modbus/TCP, LLDP, SNMP Inform, QoS, IGMP snooping, VLAN, IEEE 802.1X, HTTPS, SNMPv3, and SSH supported
- EBR-Module - External Backup and Restoring Module for easy system reconfiguration (optional accessory)



Technical data

Technology	
Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) and 100BaseFX IEEE 802.3ab for 1000BaseT(X) IEEE 802.3z for 1000BaseX IEEE 802.3x for Flow Control IEEE 802.1D for Spanning Tree Protocol IEEE 802.1w for Rapid STP IEEE 802.1Q for VLAN Tagging IEEE 802.1p for Class of Service IEEE 802.1X for Authentication IEEE 802.3ad for Port Trunk with LACP
Protocols	
IGMPv1/v2, GMRP, GVRP, SNMPv1/v2c/v3, DHCP Server/Client, DHCP Option 66/67/82, BootP, TFTP, SNTP, SMTP, RARP, RMON, HTTP, HTTPS, Telnet, SSH, Syslog, Modbus/TCP, SNMP Inform, LLDP, IEEE 1588 PTP, IPv6	
MIB	
MIB-II, Ethernet-Like MIB, P-BRIDGE MIB, Q-BRIDGE MIB, Bridge MIB, RSTP MIB, RMON MIB Group 1, 2, 3, 9	
Flow Control	IEEE 802.3x flow control, back pressure flow control
Switch Properties	
Priority Queues	4
Max. Number of Available VLANs	64
VLAN ID Range	ID 1 to 4094
IGMP Groups	256
MAC Table Size	8 K
Packet Buffer Size	1 Mbit
Interface	
Fiber Ports	100/1000Base SFP slot
RJ45 Ports	10/100/1000BaseT(X) auto negotiation speed
Console Port	RS-232 (RJ45 connector)
DIP Switches	Turbo Ring, Master, Coupler, Reserve
LED Indicators	PWR1, PWR2, FAULT, 10/100/1000M, MSTR/HEAD, CPLR/TAIL
Alarm Contact	2 relay outputs with current carrying capacity of 1 A @ 24 V DC
Digital Inputs	2 inputs with the same ground, but electrically isolated from the electronics. • +13 to +30 V for state "1" • -30 to +3 V for state "0" • Max. input current: 8 mA
Power Requirements	
Input Voltage	12/24/48 V DC, redundant dual inputs
Input Current	0.81 A @ 24 V
Overload Current Protection	Present
Connection	2 removable 6-contact terminal blocks
Reverse Polarity Protection	Present
Physical Characteristics	
Housing	Metal, IP30 protection
Dimensions	87.1 × 135 × 107 mm (3.43 × 5.31 × 4.21 in)

Physical Characteristics			
Weight	1510 g		
Installation	DIN-Rail mounting		
Environmental Limits			
Operating Temperature	Standard Models: 0 to 60 °C (32 to 140 °F) Wide Temp. Models: -40 to 75 °C (-40 to 167 °F) for T models on request		
Storage Temperature	-40 to 85 °C (-40 to 185 °F)		
Ambient Relative Humidity	5 to 95 % (non-condensing)		
Regulatory Approvals			
Safety	UL508, EN60950-1		
Hazardous Location	UL/cUL Class I, Division 2, Groups A, B, C, and D (Pending); ATEX Zone 2, Ex nC IIC (Pending)		
EMI	FCC Part 15, CISPR (EN55022) class A		
EMS	EN61000-4-2 (ESD), level 3; EN61000-4-3 (RS), level 3; EN61000-4-4 (EFT), level 3; EN61000-4-5 (Surge), level 3; EN61000-4-6 (CS), level 3; EN61000-4-8		
Maritime	DNV		
Shock	IEC 60068-2-27		
Freefall	IEC 60068-2-32		
Vibration	IEC 60068-2-6		
MTBF (mean time between failures)			
Time	330,000 hrs		
Database	Telcordia (Bellcore), GB		
Warranty			
Warranty Period	5 years		
Ordering Information			
Port Variants	Model Type	Operating Temperature	Order No.
4 * RJ45 10/100/1000BaseT(X), 5 * Combo Ports 10/100/1000BaseT(X) or 100/1000BaseSFP	IE-SW-PL09M-5GC-4GT	0 to 60 °C	1241370000
Model with extended operating temperature -40 to +75 °C on request			
Accessories			
	Model Type		Order No.
External Backup and Restore Module	EBR-Module RS232		1241430000
Networkmanagement Software	IE-NM-WMNETMANAGER		1242120000
19" Rack Mounting Kit	RM-KIT		1241440000

PoE Switches

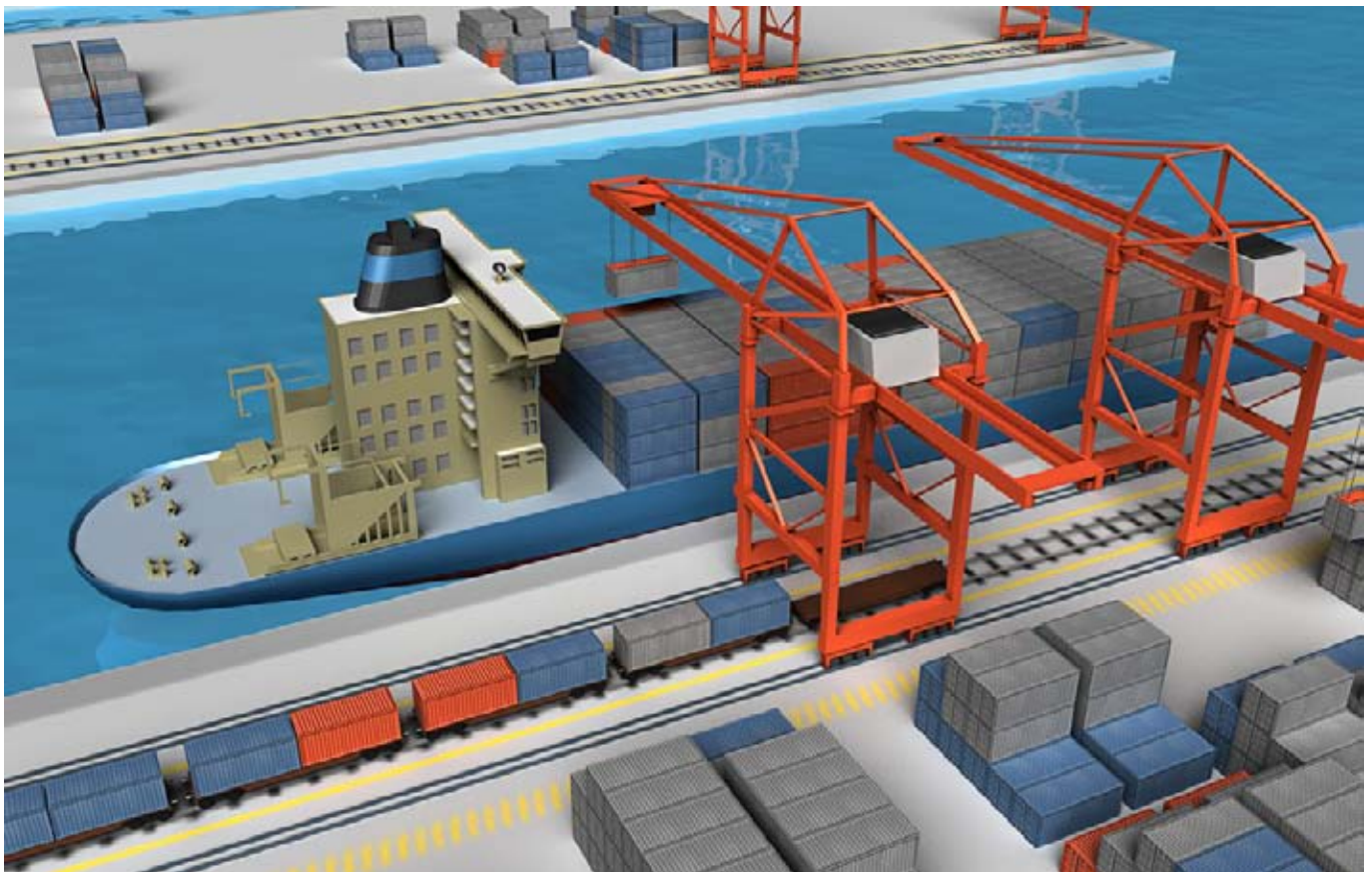
B Power over Ethernet (PoE) describes a process where power can be supplied to a network compatible device over the 8-wire Ethernet cable. In a narrower sense PoE today means the IEEE 802.3af (DTE Power over MDI) standard which was adopted in June 2003 in its final form.

The main advantage of Power over Ethernet is that you do not require a separate power supply cable and so can install Ethernet devices in hard to reach places or in areas where there is not sufficient room for many cables. This means that you can save some significant installation costs, and that you can also integrate the power supply into a central uninterruptible power supply (UPS) to improve the reliability of the connected devices.

PoE is used by network devices that need small amounts of power. It is typically used for IP telephones, network cameras, operating panel or wireless communications devices like WLAN access points.

Weidmüller PoE switches support the IEEE 802.3at standard (also known as PoE+) and can therefore supply end devices with up to 30 W per PoE port.

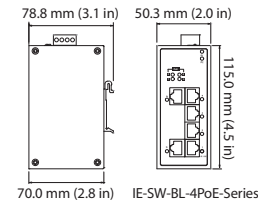
Weidmüller PoE switches also offer further advantages by the simple power supply. They do not require an additional 48 V supply in addition to the standard 24 V supply.





6-port IEEE 802.3af/at PoE+ unmanaged Ethernet Switch

- 4 IEEE 802.3af/at compliant PoE and Ethernet combo ports
- Up to 30 watts per PoE port
- 24/48 V DC wide range redundant power inputs
- Intelligent power consumption detection and classification
- Redundant dual V DC power inputs
- Broadcast Storm Protection



Technical data

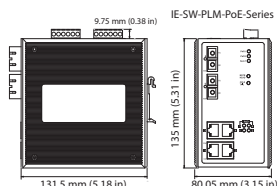
Technology	
Standards	IEEE 802.3at for Power-over-Ethernet IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) IEEE 802.3x for Flow Control
Processing Type	Store and Forward
Flow Control	IEEE 802.3x flow control, back pressure flow control
Interface	
RJ45 Ports	10/100BaseT(X) auto negotiation speed, Full/Half duplex mode and auto MDI/MDI-X connection
LED Indicators	PWR1, PWR2, 10/100M, PoE
Power Requirements	
Input Voltage	24/48 V DC
Input Current	Max 7.5 A @ 24 V DC (supports up to 4 ports at 30 watts per PoE port)
Overload Current Protection	Present
Connection	1 removable 4-contact terminal block
Reverse Polarity Protection	Present
Physical Characteristics	
Housing	Metal, IP30 protection
Dimensions	50 x 115 x 70 mm (1.96 x 4.52 x 2.76 in)
Weight	375 g
Installation	DIN-Rail mounting, wall mounting (with optional kit)
Environmental Limits	
Operating Temperature	Standard Models: 0 to 60 °C (32 to 140 °F) Wide Temp. Models: -40 to 75 °C (-40 to 167 °F) on request
Storage Temperature	-40 to 85 °C (-40 to 185 °F)
Ambient Relative Humidity	5 to 95 % (non-condensing)
Regulatory Approvals	
Safety	UL508 (Pending)
EMI	FCC Part 15, CISPR (EN55022) class A
EMS	EN61000-4-2 (ESD), level 3; EN61000-4-3 (RS), level 3; EN61000-4-4 (EFT), level 4; EN61000-4-5 (Surge), level 4; EN61000-4-6 (CS), level 3; EN61000-4-8
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6
Warranty	
Warranty Period	5 years

Ordering Information			
Port Variants	Model Type	Operating Temperature	Order No.
2 * RJ45 10/100 BaseT(X), 4 * RJ45 10/100 BaseT(X) PoE+	IE-SW-BL06-2TX-4POE	0 to 60 °C	1241380000
Note 1: Model with extended operating temperature -40 to +75 °C on request			
Note 2: Models with Fiber optic ports on request			
Accessories			
	Model Type		Order No.
19" Rack Mounting Kit	RM-KIT		1241440000

Power-over-Ethernet Switches – Premium Line

6 Port IEEE 802.3af/at PoE + Managed Ethernet Switch

- 4 IEEE 802.3af/at compliant PoE and Ethernet combo ports
- Up to 30 watts per PoE port
- 24/48 V DC wide range redundant power inputs
- Advanced PoE management functions, including PD failure check and PoE scheduling



Technical data

Technology	
Standards	IEEE 802.3at/af for Power-over-Ethernet IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) and 100BaseFX IEEE 802.3x for Flow Control IEEE 802.1D for Spanning Tree Protocol IEEE 802.1w for Rapid STP IEEE 802.1Q for VLAN Tagging IEEE 802.1p for Class of Service IEEE 802.1X for Authentication IEEE 802.3ad for Port Trunk with LACP
Protocols	
IGMPv1/v2, GMRP, GVRP, SNMPv1/v2c/v3, DHCP Server/Client, DHCP Option 66/67/82, BootP, TFTP, SNMP, SMTP, RARP, RMON, HTTP, HTTPS, Telnet, SSH, Syslog, Modbus/TCP, SNMP Inform, LLDP, IEEE 1588 PTP, IPv6	
MIB	
MIB-II, Ethernet-Like MIB, P-BRIDGE MIB, Q-BRIDGE MIB, Bridge MIB, RSTP MIB, RMON MIB Group 1, 2, 3, 9	
Flow Control	IEEE 802.3x flow control, back pressure flow control
Switch Properties	
Priority Queues	4
Max. Number of Available VLANs	64
VLAN ID Range	VID 1 to 4094
IGMP Groups	256
MAC Table Size	8 K
Packet Buffer Size	1 Mbit
Interface	
RJ45 Ports	10/100BaseT(X) auto negotiation speed, Full/Half duplex mode, and auto MDI/MDI-X connection
Console Port	RS-232 (RJ45 connector)
DIP Switches	Turbo Ring, Master, Coupler, Reserve
LED Indicators	PWR1, PWR2, FAULT, 10/100M, MSTR/HEAD, CPLR/TAIL, PoE
Alarm Contact	2 relay outputs with current carrying capacity of 1 A @ 24 V DC
Digital Inputs	2 inputs with the same ground, electrically isolated • +13 to +30 V for state "1" • -30 to +3 V for state "0" • Max. input current: 8 mA
Power Requirements	
Input Voltage	24/48 V DC
Input Current	Max. 7.8 A @ 24 V DC (supports up to 4 ports at 30 watts per PoE port)
Overload Current Protection	Present
Connection	2 removable 6-contact terminal blocks
Reverse Polarity Protection	Present
Physical Characteristics	
Housing	Metal, IP30 protection
Dimensions	80 x 135 x 131.5 mm (3.15 x 5.31 x 5.18 in)

Physical Characteristics				
Weight		1270 g		
Installation		DIN-Rail mounting		
Environmental Limits				
Operating Temperature		Standard Models: 0 to 60 °C (32 to 140 °F) Wide Operating Temp. Models: -40 to 75 °C (-40 to 167 °F) on request		
Storage Temperature		-40 to 85 °C (-40 to 185 °F)		
Ambient Relative Humidity		5 to 95 % (non-condensing)		
Regulatory Approvals				
Safety		UL508 (Pending)		
EMI		FCC Part 15, CISPR (EN55022) class A		
EMS		EN61000-4-2 (ESD), level 3; EN61000-4-3 (RS), level 3; EN61000-4-4 (EFT), level 3; EN61000-4-5 (Surge), level 3; EN61000-4-6 (CS), level 3; EN61000-4-8		
Shock		IEC 60068-2-27		
Freefall		IEC 60068-2-32		
Vibration		IEC 60068-2-6		
Warranty				
Warranty Period		5 years		
Ordering Information				
Port Variants		Model Type	Operating Temperature	Order No.
2 * RJ45 10/100 BaseT(X), 4 * RJ45 10/100 BaseT(X) PoE+		IE-SW-PL06M-2TX-4PoE	0 to 60 °C	1241390000
Note 1: Model with extended operating temperature -40 to +75 °C on request Note 2: Models with Fiber optic ports on request				
Accessories				
		Model Type		Order No.
External Backup and Restore Module		EBR-Module RS232		1241430000
Networkmanagement Software		IE-NM-WMNETMANAGER		1242120000
19" Rack Mounting Kit		RM-KIT		1241440000

Media converter

If high interference immunity is needed or long transmission distances are involved, then fibre-optic cables are advisable. Another advantage of using fibre-optic cabling is the insensitivity to lightning or voltage surges. They are also not absorbed. The use of fibre-optic based systems is already established in the process industry, plant engineering, energy distribution and the wind energy branches.

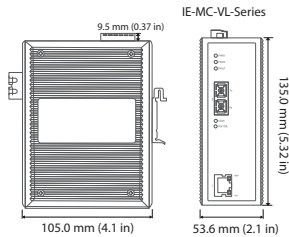
One simple and inexpensive solution is offered by the media converter. This connects the Ethernet via an RJ45 port to an optical fibre-optic cable port with SC or ST glass fibre connections. This retains the collision domain between the two Ethernet participants and means that there is status transparency exchanged between the two Ethernet interfaces and the port status.

Multimode glass fibres allow distances of up to 5,000 m to be bridged without intermediate repeaters. Singlemode fibres can be used over distances of up to 40 km.



Industrial Fast Ethernet Media Converter

- 10/100BaseT(X) auto-negotiation and auto-MDI/MDI-X
- Link Fault Pass-Through (LFP)
- Power failure, port break alarm by relay output
- Redundant power inputs
- Designed for hazardous locations (Class 1 Div. 2/Zone 2)



Technical data

Technology		
Standards	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) and 100BaseFX	
Interface		
Fiber Ports	100BaseFX (SC/ST connectors)	
RJ45 Ports	10/100BaseT(X)	
DIP Switches	100BaseFX Full/Half duplex selection, port break alarm mask	
LED Indicators	PWR1, PWR2, FAULT, 10/100M (TP port), 100M (Fiber port), FDX/COL (Fiber port)	
Alarm Contact	One relay output with current carrying capacity of 1 A @ 24 V DC	
Optical Fiber		
	100BaseFX	
	multimode	singlemode
Wavelength	1300 nm	1310 nm
Max. TX	-10 dBm	0 dBm
Min. TX	-20 dBm	-5 dBm
RX Sensitivity	-32 dBm	-34 dBm
Link Budget	12 dB	29 dB
Typical Distance	5 km ^a 4 km ^b	40 km ^c
Saturation	-6 dBm	-3 dBm
^a 50/125 µm, 800 MHz*km fiber optic cable ^b 62.5/125 µm, 500 MHz*km fiber optic cable ^c 9/125 µm, 3.5 PS/(nm*km) fiber optic cable		
Power Requirements		
Input Voltage	24 V DC (12 to 48 V DC), redundant inputs	
Input Current	0.16 A (@ 24 V)	
Connection	Removable terminal block	
Overload Current Protection	1.1 A	
Reverse Polarity Protection	Present	
Physical Characteristics		
Housing	Metal, IP30 protection	
Dimensions	53.6 x 135 x 105 mm (2.11 x 5.31 x 4.13 in)	
Weight	630 g	
Installation	DIN-Rail mounting, wall mounting (with optional kit)	
Environmental Limits		
Operating Temperature	Standard Models: 0 to 60 °C (32 to 140 °F) Wide Temp. Models: -40 to 75 °C on request (-40 to 167 °F)	
Operating Humidity	5 to 95 % RH	
Storage Temperature	-40 to 85 °C (-40 to 185 °F)	

Regulatory Approvals			
Safety	UL508, UL60950-1, CSA C22.2 No. 60950-1, EN60950-1		
EMI	FCC Part 15, CISPR (EN55022) class A		
EMS	EN61000-4-2 (ESD), level 3 EN61000-4-3 (RS), level 3 EN61000-4-4 (EFT), level 3 EN61000-4-5 (Surge), level 2 EN61000-4-6 (CS), level 3 EN61000-4-8 EN61000-4-11		
Hazardous Location	UL/cUL Class1, Division 2, Groups A, B, C, and D, ATEX Class1, Zone 2, Ex nC IIC		
Freefall	IEC60068-2-32		
Shock	IEC60068-2-27		
Vibration	IEC60068-2-6		
Maritime	DNV, GL		
MTBF	401,000 hrs; Database: MIL-HDBK-217F: GB 25 °C		
Warranty			
Warranty Period	5 years		
Ordering Information			
Port Variants	Model Type	Operating Temperature	Order No.
1 * RJ45, 1 * SC-Multimode	IE-MC-VL-1TX-1SC	0 to +60 °C	1241400000
1 * RJ45, 1 * ST-Multimode	IE-MC-VL-1TX-1ST	0 to +60 °C	1241410000
1 * RJ45, 1 * SC-Singlemode	IE-MC-VL-1TX-1SCS	0 to +60 °C	1241420000
Note: Models with extended operating temperature -40 to +75 °C on request			
Accessories			
	Model Type	Order No.	
19" Rack Mounting Kit	RM-KIT	1241440000	

Serial / Ethernet converter

Serial interfaces such as RS 232, RS 422 or RS 485 are widespread today in automation systems. To integrate these devices into modern Industrial Ethernet, Serial / Ethernet converters are used which offer investment protection for existing automation components. These devices include control systems, sensors, meters, drives, bar code readers and operator displays.

Weidmüller's Serial / Ethernet converters connect these devices simply and easily to existing Ethernet network structures. The configuration of the serial port and Ethernet port parameters is done using an internet browser. On the Ethernet side, these devices support several operating modes: including TCP server, TCP client, UDP, Real COM, RFC 2217, Reverse Telnet,

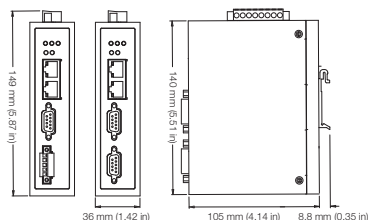
Pair Connection and Ethernet modem. These modes ensure compatibility for the network software.

There are two Ethernet ports on the device which can be used as Ethernet switch ports. This helps to reduce your cabling costs since you no longer need to connect each device with a separate Ethernet switch.



1 and 2- port Serial/Ethernet Converter for industrial automation

- Enhanced surge protection for serial, LAN, and power
- Rugged screw-type terminal blocks for power and serial connectors
- Cascading Ethernet ports for easy wiring
- Redundant DC power inputs
- Warning by relay output and email
- Low power consumption



Technical data

Ethernet Interface	
Number of Ports	2
Speed	10/100 Mbps, auto MDI/MDIX
Connector	8-pin RJ45
Magnetic Isolation Protection	1.5 KV built-in
Ethernet Line Protection	1 KV (level 2) surge protection
Serial Interface	
Number of Ports	IE-CS-2TX-1RS232/485: 1 IE-CS-2TX-2RS232/485: 2
Serial Standards	RS-232/422/485
Connector	IE-CS-2TX-1RS232/485: DB9 for RS-232, terminal block for RS-422/485 IE-CS-2TX-2RS232/485: DB9 for RS-232/422/485
Serial Line Protection	• 15 KV ESD protection for all signals • 1 KV (level 2) surge protection
RS-485 Data Direction Control	ADDC® (automatic data direction control)
Serial Communication Parameters	
Data Bits	5, 6, 7, 8
Stop Bits	1, 1.5, 2
Parity	None, Even, Odd, Space, Mark
Flow Control	RTS/CTS and DTR/DSR (RS-232 only), XON/XOFF
Baud rate	50 to 921.6 Kbps
Serial Signals	
RS-232	TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND
RS-422	Tx+, Tx-, Rx+, Rx-, GND
RS-485-4w	Tx+, Tx-, Rx+, Rx-, GND
RS-485-2w	Data+, Data-, GND
Software	
Network Protocols	ICMP, IP, TCP, UDP, DHCP, BOOTP, Telnet, Rtelnet, DNS, SNMP, HTTP, SMTP, SNTP, IGMP
Configuration Options	Web Console, Serial Console, Telnet Console, Windows Utility
Windows Real COM Drivers	Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7 x86/x64
Fixed TTY Drivers	SCO Unix, SCO OpenServer, UnixWare 7, UnixWare 2.1, SVR 4.2, QNX 4.25, QNX 6, Solaris 10, FreeBSD, AIX 5.x, HP-UX 11i
Linux Real TTY Drivers	Linux kernel 2.4.x, 2.6.x
Physical Characteristics	
Housing	Metal, IP30 protection
Weight	IE-CS-2TX-1RS232/485: 475 g IE-CS-2TX-2RS232/485: 485 g
Dimensions	36 x 105 x 140 mm (1.42 x 4.13 x 5.51 in)
Environmental Limits	
Operating Temperature	0 to 60 °C (32 to 140 °F)
Operating Humidity	5 to 95% RH
Storage Temperature	-40 to 85 °C (-40 to 185 °F)
Power Requirements	
Input Voltage	12 to 48 V DC
Power Consumption	IE-CS-2TX-1RS232/485: 12 to 48 V DC; 220 mA @ 12 V DC, 110 mA @ 24 V DC IE-CS-2TX-2RS232/485: 12 to 48 V DC; 250 mA @ 12 V DC, 125 mA @ 24 V DC



Regulatory Approvals	
EMC	CE (EN55022 Class A, EN55024), FCC Part 15 Subpart B Class A
Safety	UL508 (Pending)
Hazardous Location	UL/cUL Class 1 Division 2 Groups A, B, C and D (Pending)
ATEX	Class I, Zone 2 (Pending)
EMS	EN61000-4-2 (ESD), Level 3 EN61000-4-3 (RS), Level 3 EN61000-4-4 (EFT), Level 4 EN61000-4-5 (Surge), Level 3 EN61000-4-6 (CS), Level 3 EN61000-4-8 EN61000-4-11
Shock	IEC60068-2-27
Freefall	IEC60068-2-32
Vibration	IEC60068-2-6
Reliability	
Alert Tools	Built-in buzzer and RTC (real-time clock)
Automatic Reboot Trigger	Built-in WDT (watchdog timer)
Warranty	
Warranty Period	5 years
Pin Assignment	

RS-232/422/485 DB9 male port	PIN	RS-232	RS-422/RS-485-4w	RS-485-2W
1	DCD	TxD-(A)	-	-
2	RxD	TxD+(B)	-	-
3	TXD	RxD+(B)	Data+(B)	-
4	DTR	RxD-(A)	Data-(A)	-
5	GND	GND	GND	-
6	DSR	-	-	-
7	RTS	-	-	-
8	CTS	-	-	-

Pin Assignment	
RS-422/485 Terminal Block Wiring	
1	TxD+(B)
2	TxD-(A)
3	RxD+(B)
4	RxD-(A)
5	GND

Ordering Information			
Models	Model Type	Operating Temperature	Order No.
2x RJ45; 1x RS-232; 1x RS-422/485	IE-CS-2TX-1RS232/485	0 to +60 °C	1242080000
2x RJ45; 2x RS-232/422/485	IE-CS-2TX-2RS232/485	0 to +60 °C	1242090000

Accessories		
	Model Type	Order No.
19" Rack Mounting Kit	RM-KIT	1241440000

Industrial wireless

B

Wireless communications are preferred when working with moveable applications or difficult-to-reach areas. Currently, wireless LAN can be used for industrial manufacturing plants or facilities; it is ideal for use anywhere where traditional cabling is not suitable or where a mobile network connection is required. For example in logistics AGB (automatic guide vehicles) are connected over WLAN. Here it is important that roaming between different radio cells is possible, thereby creating an individually configurable radio coverage.

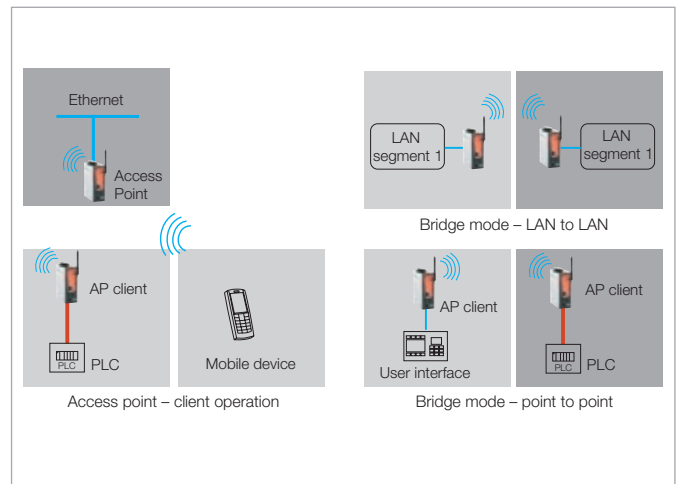
Weidmüller's versatile WLAN module can be used as an access point, bridge or client. It is quite simple to integrate into existing infrastructures because it has an alternative Power over Ethernet supply (using the data cable for the power supply).

Support for RADIUS services and WPA2 secure encryption guarantees that your data is fully protected. Multiple wireless zones can be set up so that clients can move with versatility by quickly roaming between the different radio/wireless cells. Multiple zones can be specified (multiple SSIDs) and different VLANs can be assigned for each wireless cell. This allows you to implement a one-to-one forwarding of the cable-based infrastructure to the wireless zone.



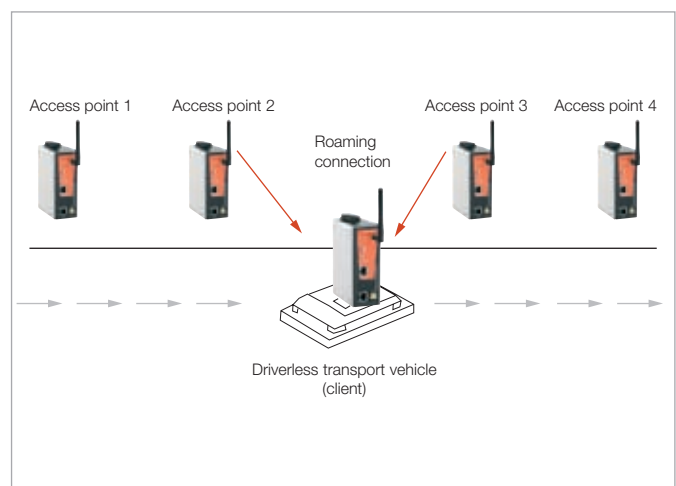
Wireless operating modes

The most common operating mode for wireless networks are AP client mode (Access Point) and bridge mode. A WLAN access point is needed and set up to create a Basic Service Set (BSS) for a wireless connection in AP client mode. The AP can be used to create a wireless LAN, or to connect an existing WLAN with a wired network. Bridge mode offers a simple way to connect two Ethernet devices over a point-to-point connection wirelessly with one another.



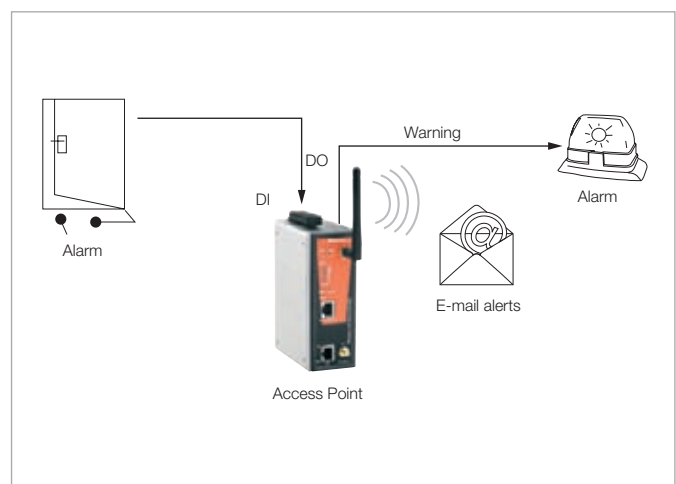
Turbo roaming for uninterrupted connections

A WLAN radio cell has a limited range depending on the antenna used. To maintain communications between devices which move over a long distance requires the connection to be passed from one access point to another. Performance can be affected where there are many moving devices and a large number of transfer points without powerful roaming technology. The roaming technology offers a seamless wireless connection and permits a swift change between different wireless access points without the risk of an interruption to the data communication.



Integrated digital inputs / outputs

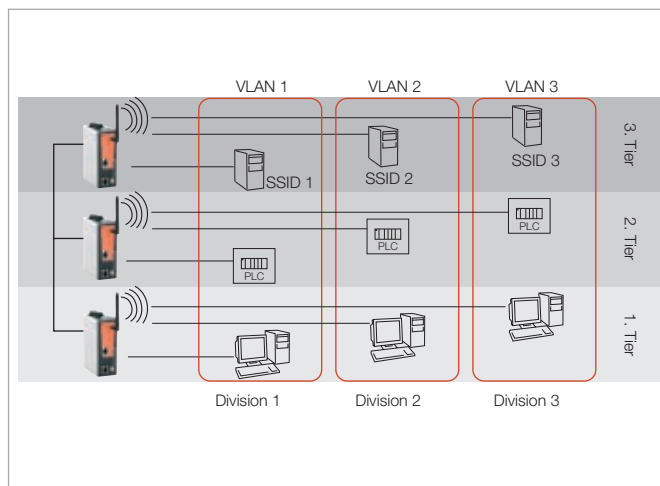
Wireless access points are often located in distant or inaccessible places in an industrial plant. This makes monitoring the status of a device or its environment by the system administrators a difficult task. Weidmüller's WLAN access points therefore have an integrated digital input/output which sends alarm messages over the network in real time to the responsible maintenance personnel when errors, like power supply failure or link breaks occur.



Wireless VLAN (Multi-SSID)

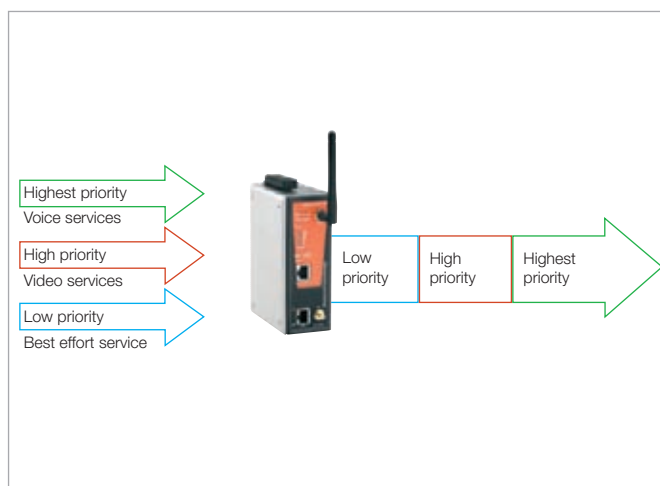
VLAN stands for virtual LAN. It is a network structure with all the characteristics of a normal LAN, but not geographically constrained.

Based on the SSID two or more clients can be added into a VLAN and integrated into a LAN independently of their geographical location. Without the use of routers, a level 2 switch in conjunction with Weidmüller WLAN access points can distinguish broadcast domains from each other. In this way VLANs offer administrators flexibility regarding network security, network management and scalability.



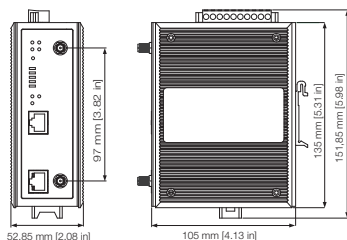
WMM for prioritising communications

Quality of Service (QoS) is a network term for controlling and measuring data transmission rates, throughput and error rates. It is an essential part of wireless communication when transmitting multimedia data like audio and video. Important data, for example, require a high priority with respect to the data throughput and low error rates. WMM (Wi-Fi multimedia) is based on the IEEE 802.11e protocol which was designed to integrate QoS functionality into a WLAN. The advantages lie in the prioritising of important data and the associated improvement of the communication quality.



Industrial Wireless - AP/bridge/client

- IEEE 802.11a/b/g compliant
- Power input by redundant 24 V DC power inputs or Power-over-Ethernet
- Multi-SSID and VLAN support
- Turbo Roaming for seamless wireless connections
- Integrated DI/DO for on-site monitoring and warning
- QoS (WMM) support



Technical data

WLAN Interface	
Standards	IEEE 802.11a/b/g/h for Wireless LAN IEEE 802.11i for Wireless Security IEEE 802.3u for 10/100BaseT(X) IEEE 802.3af for Power-over-Ethernet IEEE 802.1D for Spanning Tree Protocol IEEE 802.1w for Rapid STP IEEE 802.1Q VLAN
Spread Spectrum and Modulation (typical)	• DSSS with DBPSK, DQPSK, CCK • OFDM with BPSK, QPSK, 16QAM, 64QAM • 802.11b: CCK @ 11/5.5 Mbps, DQPSK @ 2 Mbps, DBPSK @ 11 Mbps • 802.11a/g: 64QAM @ 54/48 Mbps, 16QAM @ 36/24 Mbps, QPSK @ 18/12 Mbps, BPSK @ 9/6 Mbps
Operating Channels (central frequency)	US: 2.412 to 2.462 GHz (11 channels) 5.18 to 5.24 GHz (4 channels) EU: 2.412 to 2.472 GHz (13 channels) 5.18 to 5.24 GHz (4 channels)
Security	• SSID broadcast enable/disable • Firewall for MAC/IP/Protocol/Port-based filtering • 64-bit and 128-bit WEP encryption, WPA /WPA2-Personal and Enterprise (IEEE 802.1X/RADIUS, TKIP and AES)
Transmission Rates	802.11b: 1, 2, 5.5, 11 Mbps 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps
TX Transmit Power	802.11b: Typ. 23±1.5 dBm @ 1 to 11 Mbps 802.11g: Typ. 20±1.5 dBm @ 6 to 24 Mbps, Typ. 19±1.5 dBm @ 36 Mbps, Typ. 18±1.5 dBm @ 48 Mbps, Typ. 17±1.5 dBm @ 54 Mbps 802.11a: Typ. 18±1.5 dBm @ 6 to 24 Mbps, Typ. 16±1.5 dBm @ 36 to 48 Mbps, Typ. 15±1.5 dBm @ 54 Mbps
RX Sensitivity	802.11b: -97 dBm @ 1 Mbps, -94 dBm @ 2 Mbps, -92 dBm @ 5.5 Mbps, -90 dBm @ 11 Mbps 802.11g: -93 dBm @ 6 Mbps, -91 dBm @ 9 Mbps, -90 dBm @ 12 Mbps, -88 dBm @ 18 Mbps, -84 dBm @ 24 Mbps, -80 dBm @ 36 Mbps, -76 dBm @ 48 Mbps, -74 dBm @ 54 Mbps 802.11a: -90 dBm @ 6 Mbps, -89 dBm @ 9 Mbps, -89 dBm @ 12 Mbps, -85 dBm @ 18 Mbps, -83 dBm @ 24 Mbps, -79 dBm @ 36 Mbps, -75 dBm @ 48 Mbps, -74 dBm @ 54 Mbps
Protocol Support	
General Protocols:	Proxy ARP, DNS, HTTP, HTTPS, IP, ICMP, SNMP, TCP, UDP, RADIUS, SNMP, PPPoE, DHCP
AP-only Protocols:	ARP, BOOTP, DHCP, dynamic VLAN-Tags for 802.1X-Clients, STP/RSTP (IEEE 802.1D/w)



Interface	
Default Antenna	2 dBi dual-band omni-directional antenna, RP-SMA (male)
Connector for External Antennas	RP-SMA (female)
LAN Port	10/100BaseT(X), auto negotiation speed (RJ45-type)
Console Port	RS-232 (RJ45-type)
LED Indicators	PWR1, PWR2, PoE, FAULT, STATE, signal strength, CLIENT MODE, BRIDGE MODE, WLAN, 10M, 100M
Alarm Contact	1 relay output with current carrying capacity of 1 A @ 24 V DC
Digital Inputs	2 electrically isolated inputs • +13 to +30 V for state "1" • +3 to -30 V for state "0" • Max. input current: 8 mA
Physical Characteristics	
Housing	Metal, IP30 protection
Weight	850 g
Dimensions	53.6 x 135 x 105 mm (2.11 x 5.31 x 4.13 in)
Installation	DIN-Rail mounting
Environmental Limits	
Operating Temperature	0 to 60 °C (32 to 140 °F)
Storage Temperature	-40 to 85 °C (-40 to 185 °F)
Ambient Relative Humidity	5% to 95% (non-condensing)
Power Requirements	
Input Voltage	12 to 48 V DC, redundant dual DC power inputs or 48 V DC Power-over-Ethernet (IEEE 802.3af compliant)
Connector	10-pin removable terminal block
Power Consumption	• 0.121 to 0.494 A @ 12 to 48 V DC • 0.3 A @ 24 V DC
Reverse Polarity Protection	Present
Regulatory Approvals	
Safety	EN60950-1, UL60950-1
Radio	EN300 328, EN301 893,
EMC	EN301 489-1/-17, FCC Part 15 Subpart B Class B, EN55022/55024
Hazardous Location	UL/cUL Class I, Div. 2; ATEX Class I, Zone 2
MTBF	392.209 hrs
Warranty	
Warranty Period	5 years

Ordering Information

Models	Model Type	Operating Temperature	Order No.
IEEE 802.11a/b/g wireless AP/ Bridge/Client for european market	IE-WL-AP-BR-CL-ABG-EU	0 to +60 °C	1242100000
IEEE 802.11a/b/g wireless AP/ Bridge/Client for american market	IE-WL-AP-BR-CL-ABG-US	0 to +60 °C	1242110000

Accessories

	Model Type	Order No.
19" Rack Mounting Kit	RM-KIT	1241440000

SFP modules

1-port Gigabit Ethernet SFP modules

- Compliant with IEEE 802.3z
- Differential LVPECL inputs and outputs
- TTL signal detect indicator
- Hot pluggable LC duplex connector
- Class 1 laser product; complies with EN60825-1



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Technical data

Interface								
Ethernet Ports	1							
Connectors	Duplex LC Connector or Simplex LC							
Optical Fiber								
	Gigabit Ethernet							
	SFP-SX	SFP-LSX	SFP-LX	SFP-LHX	SFP-10A	SFP-10B	SFP-20A	SFP-20B
Wavelength	850 nm	1310 nm	1310 nm	1310 nm	TX 1310 nm, RX 1550 nm	TX 1550 nm, RX 1310 nm	TX 310 nm, RX 1550 nm	TX 1550 nm, RX 1310 nm
Max. TX	-4 dBm	-1 dBm	-3 dBm	1 dBm	-3 dBm		-2 dBm	
Min. TX	-9.5 dBm	-9 dBm	-9.5 dBm	-4 dBm	-9 dBm		-8 dBm	
RX Sensitivity	-18 dBm	-19 dBm	-20 dBm	-24 dBm	-21 dBm		-23 dBm	
Link Budget	8.5 dB	10 dB	10.5 dB	20 dB	12 dB		15 dB	
Typical Distance	550 m ^{a)}	2 km ^{b)}	10 km ^{c)}	40 km ^{c)}	10 km ^{c)}		20 km ^{c)}	
Saturation	0 dBm	-3 dBm	-3 dBm	-3 dBm	-1 dBm		-1 dBm	

^{a)} 50/125 µm, 400 MHz * km or 62.5/125 µm, 500 MHz * km @ 850 nm multimode fiber optic cable

^{b)} 62.5/125 µm, 750 MHz * km @ 1310 nm multimode fiber optic cable

^{c)} 9/125 µm singlemode fiber optic cable

Note: The actual communication distance depends on many factors, including connector loss, cable deployment, and the age of the cabling system. We recommend doing a link budget analysis and reserving a 3 dB margin for such factors.

Environmental Limits	
Operating Temperature	0 to 60 °C (32 to 140 °F)
Storage Temperature	-40 to 85 °C (-40 to 185 °F)
Ambient Relative Humidity	5 to 95 % (non-condensing)
Regulatory Approvals	
Safety	UL, TÜV
Warranty	
Warranty Period	3 years

Ordering Information			
SFP Variants	Model Type	Operating Temperature	Order No.
Gigabit Ethernet, Multimode, LC Connector, 500 m	IE-SFP-1GSXLC	0 to +60 °C	1241490000
Gigabit Ethernet, Multimode, LC Connector, 2 km	IE-SFP-1GLSXLC	0 to +60 °C	1241500000
Gigabit Ethernet, Singlemode, LC Connector, 10 km	IE-SFP-1GLXLC	0 to +60 °C	1241510000
Gigabit Ethernet, Singlemode, LC Connector, 40 km	IE-SFP-1GLHLC	0 to +60 °C	1241520000
WDM-Type, Gigabit Ethernet, LC Connector, 10 km, Tx 1310 nm, Rx 1550 nm, must be paired with IE-SFP-1G10BLC	IE-SFP-1G10ALC	0 to +60 °C	1241530000
WDM-Type, Gigabit Ethernet, LC Connector, 10 km, Tx 1550 nm, Rx 1310 nm, must be paired with IE-SFP-1G10ALC	IE-SFP-1G10BLC	0 to +60 °C	1241540000
WDM-Type, Gigabit Ethernet, LC Connector, 20 km, Tx 1310 nm, Rx 1550 nm, must be paired with IE-SFP-1G20BLC	IE-SFP-1G20ALC	0 to +60 °C	1241550000
WDM-Type, Gigabit Ethernet, LC Connector, 20 km, Tx 1550 nm, Rx 1310 nm, must be paired with IE-SFP-1G20ALC	IE-SFP-1G20BLC	0 to +60 °C	1241570000

Note: WDM-type SFP modules must be used in pairs (e.g. SFP-1GXXALC and SFP-1GXXBLC)

1-port Fast Ethernet SFP modules

- Compliant with IEEE 802.3u
- Differential PECL inputs and outputs
- TTL signal detect indicator
- Hot pluggable LC duplex connector
- Class 1 laser product; complies with EN60825-1



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Technical data

Interface			
Ethernet Ports	1		
Connectors	Duplex LC Connector		
Optical Fiber			
	Fast Ethernet		
	SFP-M	SFP-S	SFP-L
Wavelength	1300 nm	1310 nm	1550 nm
Max. TX	-18 dBm	0 dBm	0 dBm
Min. TX	-8 dBm	-5 dBm	-5 dBm
RX Sensitivity	-34 dBm	-34 dBm	-34 dBm
Link Budget	26 dB	29 dB	29 dB
Typical Distance	4 km ^{a)}	40 km ^{b)}	80 km ^{b)}
Saturation	0 dBm	-3 dBm	-3 dBm

^{a)} 50/125 µm or 62.5/125 µm, 800 MHz * km @ 1300 nm multimode fiber optic cable

^{b)} 9/125 µm singlemode fiber optic cable

Environmental Limits	
Operating Temperature	-40 to 85 °C (-40 to 185 °F)
Storage Temperature	-40 to 85 °C (-40 to 185 °F)
Ambient Relative Humidity	5 to 95 % (non-condensing)
Regulatory Approvals	
Safety	UL, TÜV
Warranty	
Warranty Period	3 years

Ordering Information			
Port Variants	Model Type	Operating Temperature	Order No.
Fast Ethernet, Multimode, LC Connector, 4 km	IE-SFP-1FEMLC-T	-40 to +85 °C	1241450000
Fast Ethernet, Singlemode, LC Connector, 40 km	IE-SFP-1FESLC-T	-40 to +85 °C	1241470000
Fast Ethernet, Singlemode, LC Connector, 80 km	IE-SFP-1FELLC-T	-40 to +85 °C	1241480000

External Backup and Restore Module for System Configuration

- Reduce system downtime by simple reconfiguration in case of replacing devices
- Plug-n-Play system backup and restoration
- Compact, rugged, reliable design
- Supports all managed Ethernet switches



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Technical data

Basic Operation		
Connector	RS-232 RJ45 port	
Configuration	Use the WEB-Console of managed Switches	
Power Requirements		
Input Voltage	3 to 5 V DC (through the RS-232 port's RTS signal)	
Physical Characteristics		
Housing	PVC molding, IP40 protection	
Dimensions	32.5 x 97 x 12 mm (8.07 x 3.82 x 0.47 in)	
Weight	50 g	
Mounting possibility	M4 screw (< 4 mm)	
Cable Length	35 cm (including connector)	
Environmental Limits		
Operating Temperature	0 to 60 °C (32 to 140 °F)	
Storage Temperature	-20 to 70 °C (-4 to 158 °F)	
Ambient Relative Humidity	5 to 95 % (non-condensing)	
Regulatory Approvals		
EMI	FCC Part 15, CISPR (EN55022) Class A	
EMS	EN61000-4-2 (ESD), level 2; EN61000-4-3 (RS), level 3; EN61000-4-4 (EFT), level 3; EN61000-4-5 (Surge), level 3; EN61000-4-6 (CS), level 3	
Warranty		
Warranty Period	5 years	
Ordering Information		
Models	Type	Order No.
External Backup and Restore Module	EBR-Module RS232	1241430000

Kit for 19"-rack mounting

- For assembling top-hat rail-based devices in 19" racks



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Technical data

Physical Characteristics		
Dimensions	481 x 177.8 x 202.4 mm	
Ordering Information		
Models	Type	Order No.
19" Rack Mounting Kit	RM-KIT	1241440000

Passive components

Passive components

IE-line connector	C.2
Differences between industrial and office Ethernet	C.4
IE-LINE connectors: the modular principle	C.5
IE-LINE connectors: selection chart	C.6
PROFINET and SERCOS III cabling solutions	C.8
Ethernet/IP cabling solutions	C.12
IP 20 plug-in connector	C.16
IP 20 mounting rail outlets	C.20
19" patch panel	C.25
IP 65 FrontCom® Micro service interface	C.26
IP 67 plug-in connector	
PushPull V14	C.28
Bayonet V1	C.34
PushPull V4	C.44
RockStar® V5	C.52
SnapIn V6	C.54
M12	C.58
Inserts	C.61
PushPull Power	C.70
IP 65 connection components	
FreeCon V14	C.72
FreeCon Active PROFINET FO repeater	C.75
V1 junction boxes	C.76
FreeCon V4	C.78
V4 junction boxes	C.79
V5 junction boxes	C.80
V6 junction box	C.81

The Weidmüller IE-LINE plug-in connectors with **STEADYTEC**® technology



STEADYTEC® – this name stands for the future of connection technology in the field of data and signal transmissions. Established by the leading names in this branch of industry, the technology brand **STEADYTEC**® forms the foundation for reliable, application-centric and conforming solutions, for offices and harsh industrial conditions.

The objective: The development of reliable plug-in connector technologies for industrial applications. Technologies that satisfy the highest customer demands and hence enable new, professional and consistent solutions.

The result: An extremely reliable, extraordinarily practical, flexible and especially efficient plug-in connector system for office and industrial applications. Using products whose characteristics reflect perfectly the values from which they originated:

- fast
- reliable
- solution-based
- simple

The Ethernet connector system: clever – flexible – modular

Connectors for modern industrial applications need to be designed in such a way that they simplify processes and cope with faster data transmission. Weidmüller's Ethernet connectors keep you a step ahead. These products are not only ready for 10 gigabit, they are also standardised for IEC 61076-3-106 and IEC 61076-3-117. In addition, the connector variants 4 (Ethernet/TCP/IP), variants 5 and 1 (Ethernet IP) and variant 14 (PROFINET/AIDA) which are named in these standards are all specified as mandatory in the standards covering generic cabling systems for industrial premises: ISO/IEC 24702, IEC 61918 (Automation Island), as well as for Fieldbus installations IEC 61784-5. What's more, you have a unique choice of versions made of plastic or metal as well as inserts for copper and fibre-optic cabling.

All of the connectors are designed for ease of use and for quick on-site assembly. They are also modular and are tailored to suit your application.





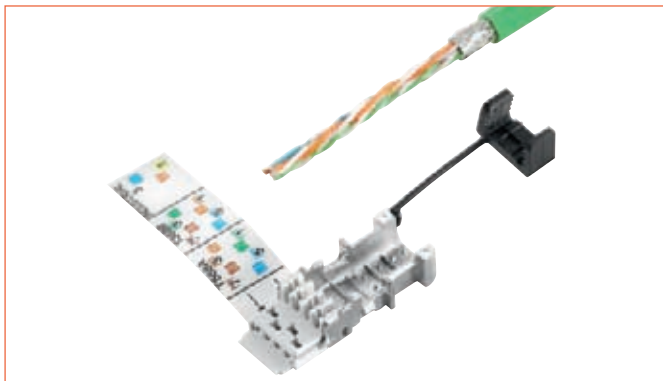
Tool-free assembly and powerful connections: the RJ45 gigabit connector!

You can now securely plug the connector you need directly into your machinery with very little effort – and without a single tool! The 10-gigabit connector, with IDC-connection, was developed to provide quick, simple, secure and, most importantly, tool-free wiring.

In addition, zinc die-casting makes the connector extra robust and therefore suitable for industrial applications. It is also fitted with a protected locking clip for tough industrial applications. Weidmüller's IE product line fulfils the requirements for 10 GBit Ethernet, according to IEEE 802.3an, up to 500 MHz.

STEADYTEC®: Systematic benefits

- Cat.6_A 10 GBit System Class E_A
- Assembly without tools in the field
- Countless variations thanks to highly diverse combinations of inserts
- Unrestricted compatibility because standardised to IEC 61076-3-106
- Reliable and long-lasting thanks to use of diecast zinc
- Suitable for industry thanks to IP 67 class of protection
- Simple ordering procedure and low storage costs thanks to Weidmüller's modular system



1. Strip sheath cladding and shorten shield to 5 mm



2. Prepare wires and shorten



3. Snap together the two pluggable elements



4. Finished

Differences between industrial and office Ethernet

Office Ethernet



Cabling

- Fixed building installation
- Variable connection options
- Pre-assembled connection cables
- Star topology most widely in use

Transmission

- Large volume of data
- Mid-level network availability
- Mostly only acyclical transmission
- No real-time characteristics required for standard applications

Surroundings

- No extreme conditions

Industrial Ethernet



- Individual plant-influenced networks
- Robust component characteristics
- On-site, user assembly connections
- Redundant network topologies (ring)

- Small data packets (measurement values)
- Very high network availability
- Extremely high real-time requirement
- Mostly cyclical transmission

- Extreme temperatures
- Dust, dirt, splashing water, oils gases,
- Vibration, electromagnetic fields
- Risks of danger and damage from mechanical or chemical influences

Unlimited combinations: the modular principle



	Plug insert	Plug housing	Flange-mounted housing	Flange insert
Copper	 RJ45 crimp	 HDC RockStar® / Variant 5		 RJ45 coupling
	 RJ45 can be assembled on-site	 Push-Pull / Variant 14		 RJ45 Module A, B, P
		 Bayonet / Variant 1, plastic		 USB-A coupling
Fibre-optic		 Bayonet / Variant 1, metal		
	 2 x SC	 Push-Pull / Variant 4		 2SC/SCRJ adapter
	 LC duplex	 Push-Pull / Variant 14		 LC duplex adapter

Take advantage of maximum flexibility! The range of products guarantees you decisive advantages for your industrial applications. During planning, assembling and everyday operations. All variants are designed for class of protection IP 67.

The Weidmüller products take account of the latest market conditions and most recent international standards. In doing so we offer you the option of unrestricted choice. What that means is that you get exactly the products you need for your application!

Features

- The only 8-core, on-site assembled, RJ45 connector for 10 Gigabit-Ethernet (Cat.6_A / Class E_A).
- Larger cable sheath diameter range (up to 10 mm) for variants V4, V1, and V14. For V5 up to 12 mm.
- Suitable for connecting stranded conductors in sizes AWG 27/7 to AWG 22/7; solid conductors in sizes AWG 27/1 to 22/1.
- Modules and couplers have a robust diecast zinc housing.
- Design results in enhanced vibration and shock resistance for couplers and RJ45 modules.
- Variable bulkhead housing fixing options for variants V1 and V4.
- Additional marking surfaces on plug and bulkhead housing, subsequent colour coding of IP 20 and IP 67 plug-in connectors.
- Dirt-resistant housing design with enhanced resistance to oils, greases, acids and alkalis.

IE-LINE connectors: selection chart



Metal plug

Housings				Variant 1 Bayonet		Variant 14 PushPull RJ		Variant 14 PushPull fibre-optic		Variant 5 HDC
										
				With KS	Without KS	With KS	Without KS	With KS	Without KS	Without KS
Inserts				1962560000	1962550000	1011570000	1011560000	1058110000	1058100000	1962540000
	RJ45 AWG 24 crimp		1962720000	1963150000	1963140000	1012070000	1012160000			1963110000
	RJ45 AWG 22 tool-free	TIA-A/-B/-P TIA-A TIA-B PROFINET	1962730000 1132010000 1132020000 1132030000	1963130000	1963120000	1012090000	1012170000			1963200000 1271250000
	LWL SC	multimode	1067380000	1963270000	1963260000			Please order separately		
		singlemode	1067390000	1963310000	1963300000			Please order separately		
		POF	1067410000	1963290000	1963280000				1191550000	
	LWL LC	multimode	1962780000	1963230000	1963220000			Please order separately		
		singlemode	1962790000	1963250000	1963240000			Please order separately		
	Protective cap			1965690000		1058280000		1058280000		1968930002

KS = anti-kink protection

Plastic plug

Housings				Variant 1 Bayonet		Variant 4 PushPull	
							
				With KS	Without KS	With KS	Without KS
Inserts				1012460000	1012440000	1962530000	1962520000
	RJ45 AWG 24 crimp		1962720000	1012560000	1012470000	1963190000	1963180000
	RJ45 AWG 22 tool-free	TIA-A/-B/-P TIA-A TIA-B PROFINET	1962730000 1132010000 1132020000 1132030000	1012570000	1012490000	1963170000	1963160000 1271240000
	LWL SC	multimode	1067380000	Please order separately		1963370000	1963360000
		singlemode	1067390000	Please order separately		1963410000	1963400000
		POF	1067410000	Please order separately		1963390000	1963380000
	LWL LC	multimode	1962780000	Please order separately		1963330000	1963320000
		singlemode	1962790000	Please order separately		1963350000	1963340000
	Protective cap			1965690000		1963890000	

KS = anti-kink protection

 Individual components

 Sets

V1 with SC multimode
1963260000



V5 with RJ45 crimp
1963110000



V4 with LC multimode
1063320000



V14 with RJ45 tool-free
1012170000



Metal flange

Housings				Variant 1 Bayonet	Variant 14 PushPull RJ		Variant 14 PushPull fibre-optic		Variant 5 HDC
Inserts					 Standardised flange	 Central flange	 Standardised flange	 Central flange	
	RJ45 coupling		1962840000	1963540000	1011540000	1047950000			1963530000
				1963470000	1012310000	1058250000			1963510000
	RJ45 module	TIA-A	1962850000	1963480000	1012320000	1058270000			1963460000
		TIA-B	1963840000	Please order separately	Please order separately	Please order separately			Please order separately
		PROFINET	1963830000	Please order separately	1085260000	Please order separately			1963700000
	SC/SCRJ coupling	multimode	1964430000	1964450000			1058120000	1062590000	
		singlemode	1962870000	1963440000			1058140000	1062600000	
	LC Duplex coupling	multimode	1964420000	1964440000			1058130000	1062610000	
		singlemode	1962880000	1963430000			1058150000	1062620000	
	USB coupling		1019570000	Please order separately	Please order separately	Please order separately			Please order separately
	Protective cap			1965700000	1058310000	1058310000	1058310000	1058310000	1968930000

Plastic flange

Housings				Variant 1 Bayonet	Variant 4 PushPull
Inserts					
	RJ45 coupling		1962840000	1016960000	1963520000
				1012370000	1963490000
	RJ45 module	TIA-A	1962850000	1012380000	1963500000
		TIA-B	1963840000	Please order separately	1963730000
		PROFINET	1963830000	Please order separately	Please order separately
	SC/SCRJ coupling	multimode	1964430000	Please order separately	1964470000
		singlemode	1962870000	Please order separately	1963420000
	LC Duplex coupling	multimode	1964420000	Please order separately	1964460000
		singlemode	1962880000	Please order separately	1963450000
	USB coupling		1019570000	Please order separately	Please order separately
	Protective cap			1965700000	1963900000

 Individual components
 Sets

V5 with RJ45 coupling
1963510000



V1 with SC multimode
1964450000



V4 with LC multimode
1964460000

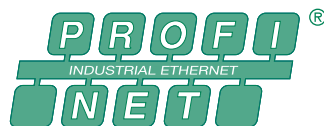


V14 with RJ45 module
1012320000



PROFINET and SERCOS III cabling solutions

Weidmüller offers all cabling products to create a profile specific infrastructure which meets all the needs of PROFINET and SERCOS III.



The cabling components for copper and fibre-optic cables are designed and tested for use in hard industrial conditions. Interoperability in the system is assured by the PROFINET and SERCOS cabling guidelines that specifically prescribe the interfaces to be used. For PROFINET this is guaranteed through the manufacturer's declaration.

Comprehensive protection against disturbance by electromagnetic fields is achieved through the use of high quality shielding of both cables and the related connection components. Significant system reserves are offered through the star quad design of the cables and their wire cross-section of AWG 22. Stable real-time transmission is guaranteed, for applications such as PROFINET IRT or SERCOS III typical hardware synchronisations, by the low signal transmission time differences resulting from the cable construction. At the same time the cables offer high crush resistance for reliable installation in industrial applications.

The cabling components also have a remarkable ease of handling in the field. The plug-in connectors for copper and fibre-optic can all be assembled on-site. This reduces installation time, reduces errors and simplifies maintenance.

Profile specific guidelines for the connection components

Cable:

- Quad-star design of AWG 22

Connector:

- IP 20 RJ45
- IP 20 SC-RJ
- IP 67 PushPull RJ45
- IP 67 PushPull Power
- IP 67 PushPull SC-RJ
- IP 67 M12 D coding



Weidmüller offers you a wide range of cabling solutions for PROFINET and SERCOS III applications. IP 20 plug-in connectors for copper and fibre-optic cables belong to the program as well as IP 67 plug-in connectors and junction boxes

for the toughest requirements. The components are designed to be used together from the floor distributors down to the machines.

IP 67
assembled RJ45 cables



IP 67
assembled M12 cables



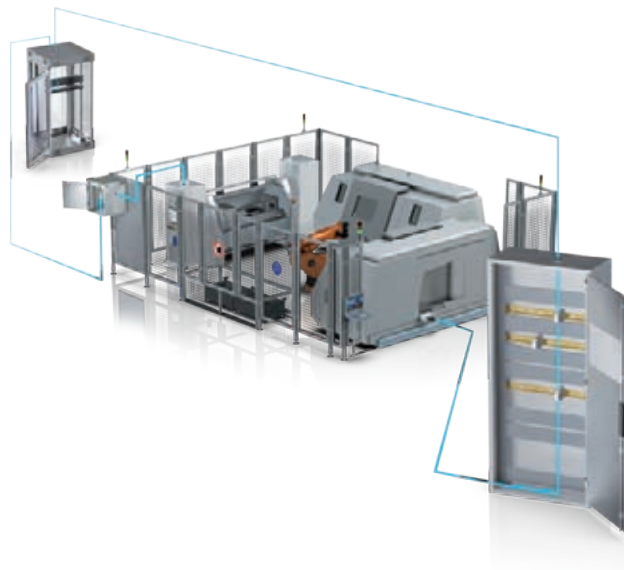
IP 67
plug-in M12 connectors



IP 67
connection components



Cable by the metre
copper and fibre-optic



IP 67
plug-in connectors data / power



19" patch panel



IP 67
flanges data / power



IP 20
plug-in connector



IP 20
assembled cables



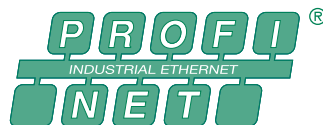
IP 20
mounting rail outlets



IP 65
service interfaces



Selection table



IP 20 plug-in connector



Description	Type	Order No.	See page
RJ 45 tool-free PROFINET printing	IE-PS-RJ45-FH-BK-P	1132060000	C.16
SC-RJ for 1 mm POF fibres	IE-PS-SCRJ1-POF	1206720000	C.18
SC-RJ for multimode fibres 50/62.5 µm	IE-PS-SCRJ1-MM	1206730000	C.18
SC-RJ for singlemode fibres 9 µm	IE-PS-SCRJ1-SM	1206740000	C.18

C

IP 20 assembled data cables



Description	Type	Order No.	See page
RJ 45 PUR patch cable - type C - 1 m	IE-C5DD4UG0010A20A20-E	1173030010	D.20
RJ 45 PUR patch cable - type C - 3 m	IE-C5DD4UG0030A20A20-E	1173030030	D.20
RJ 45 PUR patch cable - type C - 5 m	IE-C5DD4UG0050A20A20-E	1173030050	D.20
RJ 45 PUR patch cable - type C - 10 m	IE-C5DD4UG0100A20A20-E	1173030100	D.20
SC-RJ zipcord patch cable - POF - 1 m	IE-FPOZ2EE0001MSJ0SJ0-X	1273430010	D.35
SC-RJ zipcord patch cable - POF - 3 m	IE-FPOZ2EE0003MSJ0SJ0-X	1273430030	D.35
SC-RJ zipcord patch cable - POF - 5 m	IE-FPOZ2EE0005MSJ0SJ0-X	1273430050	D.35
SC-RJ zipcord patch cable - POF - 10 m	IE-FPOZ2EE0010MSJ0SJ0-X	1273430100	D.35

Further PROFINET cables are available on request - SERCOS 3 cables on request

IP 20 mounting rail outlets



Description	Type	Order No.	See page
RJ45 coupling	IE-TO-RJ45-C	8946920000	C.20
RJ45 module PROFINET printing	IE-TO-RJ45-FJ-P	8946950000	C.21
SC-RJ POF coupling / multimode	IE-TO-SCRJ-MM	8946990000	C.23
SC-RJ singlemode coupling	IE-TO-SCRJ-SM	8947000000	C.23

19" patch panel



Description	Type	Order No.	See page
With adaptor, without RJ45 inserts	IE-PPA19-24P	1049270000	C.25
RJ 45 module PROFINET printing	IE-BI-RJ45-FJ-P	1963830000	C.25
fitted with 24 RJ45 couplings	IE-PPA19-24P-RJ45-C	1049930000	C.25

other inserts from page C.61

IP 65 service interface



Description	Type	Order No.	See page
FrontCom® Micro RJ45 coupling	IE-FCM-RJ45-C	1018790000	C.26
FrontCom® Micro RJ45 module PROFINET printing	IE-FCM-RJ45-FJ-P	1018830000	C.26

IP 67 flange data



Description	Type	Order No.	See page
PushPull standard flange RJ45 coupling	IE-BSS-V14M-RJ45-C	1012310000	C.29
PushPull central cable gland RJ45 coupling	IE-BSC-V14M-RJ45-C	1058250000	C.29
PushPull standardised flange RJ45 module PROFINET printing	IE-BSS-V14M-RJ45-FJ-P	1085260000	C.29
PushPull standardised flange hybrid (Q10) 10-pole module without contacts	IE-BSS-V14M-HYB-10P-FJ	1072900000	C.31
Contacts for Hybrid (Q10) module 0.5 mm² - 0.75 mm² VPE 300	IE-BIC-HYB-P-0,75-300	1068970000	C.31
Contacts for Hybrid (Q10) module 0.2 mm² - 0.5 mm² VPE 300	IE-BIC-HYB-P-0,5-300	1096150000	C.31
PushPull standardised flange SC-RJ coupling POF / multimode	IE-BSS-V14M-SCRJ-MM-C	1058120000	C.33
PushPull standardised flange SC-RJ coupling singlemode	IE-BSS-V14M-SCRJ-SM-C	1058140000	C.33
PushPull central cable gland SC-RJ coupling POF / multimode	IE-BSC-V14M-SCRJ-MM-C	1062590000	C.33
PushPull central cable gland SC-RJ coupling singlemode	IE-BSC-V14M-SCRJ-SM-C	1062600000	C.33
PushPull device flange	IE-BHD-V14M	1047940000	C.33
PushPull flange protective cap IP 67	IE-BP-V14P	1058310000	E.18

other inserts from page C.61

IP 67 flange power



Description	Type	Order No.	See page
PushPull Power standardised flange with 24 V / 16 A use	IE-BSS-VAPM-24V	1069030000	C.69
PushPull Power device flange	IE-BHD-VAPM	1068920000	C.69
PushPull Power flange protective cap IP 67	IE-BP-VAPP	1068930000	E.18

IP 67 data connectors

	Description	Type	Order No.	See page
	PushPull RJ45 tool-free module PROFINET printing	IE-PS-V14M-RJ45-FH-P	1012170000	C.28
	PushPull Hybrid (Q10) use, 10-pole module without contacts	IE-PS-V14M-HYB-10P	1072910000	C.30
	Contacts for Hybrid (Q10) use 0.75 mm ² VPE 300	IE-PIC-HYB-S-0,75-300	1068950000	C.30
	Contacts for Hybrid (Q10) use 0.2 mm ² - 0.5 mm ² VPE 300	IE-PIC-HYB-S-0,5-300	1096180000	C.30
	PushPull SC-RJ use POF 1 mm	IE-PS-V14M-2SC-POF	1191550000	C.32
	PushPull plug protective cap IP 67	IE-PP-V14P	1058280000	E.18

IP 67 assembled data cables

	Description	Type	Order No.	See page
	PushPull RJ 45 patch cable PUR - Type C - 1 m	IE-C5DD4UG0010A2EA2E-X	1119730010	D.20
	PushPull RJ 45 patch cable PUR - Type C - 3 m	IE-C5DD4UG0030A2EA2E-X	1119730030	D.20
	PushPull RJ 45 patch cable PUR - Type C - 5 m	IE-C5DD4UG0050A2EA2E-X	1119730050	D.20
	PushPull RJ 45 patch cable PUR - Type C - 10 m	IE-C5DD4UG0100A2EA2E-X	1119730100	D.20

Further PROFINET cables are available on request - SERCOS 3 cables on request

IP 67 Power connectors

	Description	Type	Order No.	See page
	PushPull Power with 24 V / 16 A use	IE-PS-VAPM-24V	1068910000	C.68

IP 67 plug-in M12 connectors

M 12 components can be found from page C.58

IP 65 connection components

	Description	Type	Order No.	See page
	FreeCon passive double socket junction box RJ45/Power	IE-CD-V14MRJ/VAPM24V-FJ	1068830000	C.70
	FreeCon passive single socket junction box RJ45	IE-CD-V14MRJ-FJ	1068880000	C.70
	FreeCon passive single socket junction box Hybrid (Q10) without contacts	IE-CD-V14MHYB-10P-FJ	1068850000	C.72
	Contacts for Hybrid (Q10) module 0.75 mm ² VPE 300	IE-BIC-HYB-P-0,75-300	1068970000	C.31
	Contacts for Hybrid (Q10) module 0.2 mm ² - 0.5 mm ² VPE 300	IE-BIC-HYB-P-0,5-300	1096150000	C.31
	Mounting foot for junction boxes	IE-CD-MA	1099580000	C.70
	FreeCon passive double connection RJ45/Power	IE-CD-V14MRJ/VAPM24V-C-MA	1068820000	C.71
	FreeCon passive single connection RJ45	IE-CD-V14MRJ-C-MA	1068870000	C.71
	FreeCon active FO PROFINET repeater	IE-CDR-V14MSCPOF/VAPM-C	1253240000	C.73
	PushPull flange protective cap IP 67	IE-BP-V14P	1058310000	E.18

Bulk stock copper cable

	Description	Type	Order No.	See page
	100 m ring installation cable PVC type A	IE-C5AS4V1000	8899000000	D.12
	Bulk stock installation cable PVC type A from 110 m	IE-C5AS4VG-MW	8955950000	D.12
	100 m ring connection cable PVC type B	IE-C5DS4V1000	8898990000	D.12
	Bulk stock connection cable PVC type B from 110 m	IE-C5DS4VG-MW	8955560000	D.12
	100 m ring dragline cable PUR type C	IE-C5DD4U1000	8899010000	D.13
	Bulk stock dragline cable PUR type C from 110 m	IE-C5DD4UG-MW	8947670000	D.13
	Bulk stock hybrid cable PVC from 110 m	IE-C5DHAG-MW	1172250000	D.14

Bulk stock fibre-optic cable

	Description	Type	Order No.	See page
	Multimode breakout cable 2x50 µm PUR from 50 m	IE-FM5B2UE-MW	8946000000	D.31
	POF zip-cord cable 2X980/1000 µm TPE, from 50 m	IE-FPOZ2EE-MW	1242820000	D.32
	POF breakout cable 2X980/1000 µm TPE, from 50 m	IE-FPOD2UE-MW	1172280000	D.32

Ethernet/IP cabling solutions

The wiring guidelines for Ethernet/IP clearly defines the interfaces to be used to ensure interoperability in Ethernet/IP systems.



Weidmüller offers all the cabling products needed to build a requirement specific infrastructure which is tailored to the needs of Ethernet/IP.

The wiring components for copper and fibre-optic cables are designed and tested for use in harsh industrial environments. The user is provided with clear guidelines about the requirements of the components for use in industrial environments with the introduction of the MICE classification (Ethernet/IP Media Planning and Installation Manual).

The high-quality shielding of the cables and connection components offers comprehensive protection against electromagnetic interference.

The cables are 8-wire twisted-pair cables for RJ45 use or star quad for use in M12.

The cabling components are also easy to handle in the field. The plug-in connectors for copper and fibre-optic can all be assembled on-site. This reduces installation time, reduces errors and simplifies maintenance.

The connectors wire/pin assignment is either according to TIA568-A or TIA568-B as required. The connectors and modules are marked accordingly making them easier to connect.

Profile specific guidelines for the connection components

Cable:

- 8-wire twisted-pair shielded cables

Connector:

- IP 20 RJ45
- IP 20 SC-RJ
- IP 67 bayonet RJ45
- IP 67 bayonet SC-RJ
- IP 67 M12 D coding



Weidmüller offers you a wide range of cabling solutions for Ethernet/IP applications. IP 20 plug-in connectors for copper and fibre-optic cables belong to the program as well as IP 67 plug-in connectors and junction boxes for the toughest

requirements. The components are designed to be used together from the floor distributors down to the machines.

IP 67
assembled RJ45 cables



IP 67
assembled M12 cables



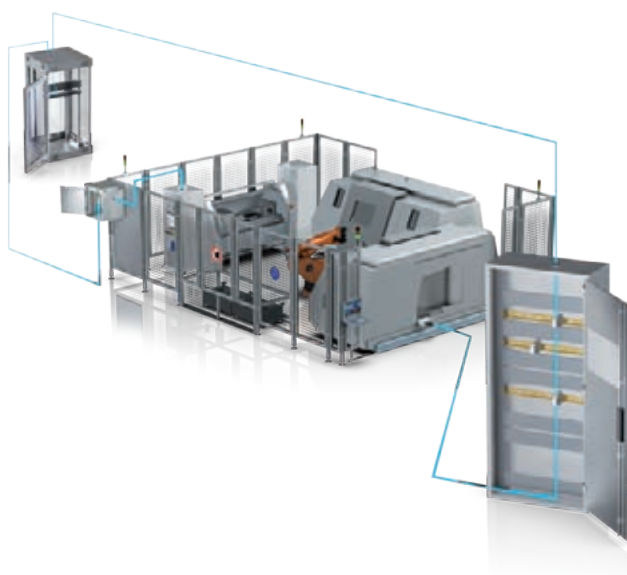
IP 67
plug-in M12 connectors



IP 67
connection components



Cable by the metre
copper and fibre-optic



IP 67
plug-in connectors data



19" patch panel



IP 67
flanges data / power



IP 20
plug-in connector



IP 20
assembled cables



IP 20
mounting rail outlets



IP 65
service interfaces



Selection table



IP 20 plug-in connector

	Description	Type	Order No.	See page
	RJ45 crimp	IE-PS-RJ45-TH-BK	1963590000	C.17
	RJ 45 tool-free TIA-A printing	IE-PS-RJ45-FH-BK-A	1132040000	C.16
	RJ 45 tool-free TIA-B printing	IE-PS-RJ45-FH-BK-B	1132050000	C.16
	SC-RJ for 1 mm POF fibres	IE-PS-SCRJ1-POF	1206720000	C.18
	SC-RJ for multimode fibres 50/62.5 µm	IE-PS-SCRJ1-MM	1206730000	C.18
	SC-RJ for singlemode fibres 9 µm	IE-PS-SCRJ1-SM	1206740000	C.18

IP 20 assembled data cables

	Description	Type	Order No.	See page
	RJ 45 patch cables - see CabinetLine			
	SC-RJ zipcord patch cable - POF - 1 m	IE-FPOZ2EE0001MSJ0SJ0-X	1273430010	D.35
	SC-RJ zipcord patch cable - POF - 3 m	IE-FPOZ2EE0003MSJ0SJ0-X	1273430030	D.35
	SC-RJ zipcord patch cable - POF - 5 m	IE-FPOZ2EE0005MSJ0SJ0-X	1273430050	D.35
	SC-RJ zipcord patch cable - POF - 10 m	IE-FPOZ2EE0010MSJ0SJ0-X	1273430100	D.35
	Other Ethernet/IP cables available on request			

IP 20 mounting rail outlets

	Description	Type	Order No.	See page
	RJ45 coupling	IE-TO-RJ45-C	8946920000	C.20
	RJ45 Module TIA-A printing	IE-TO-RJ45-FJ-A	8946930000	C.21
	RJ45 Module TIA-B printing	IE-TO-RJ45-FJ-B	8946940000	C.21
	SC-RJ POF coupling / multimode	IE-TO-SCRJ-MM	8946990000	C.23
	SC-RJ singlemode coupling	IE-TO-SCRJ-SM	8947000000	C.23

19" patch panel

	Description	Type	Order No.	See page
	fitted with 24 RJ45 modules TIA-A printing	IE-PPA19-24P-RJ45-FJ-A	1049910000	C.25
	fitted with 24 RJ45 modules TIA-B printing	IE-PPA19-24P-RJ45-FJ-B	1049920000	C.25
	fitted with 24 RJ45 couplings	IE-PPA19-24P-RJ45-C	1049930000	C.25
	other inserts from page C.61			

IP 65 service interface

	Description	Type	Order No.	See page
	FrontCom® Micro RJ45 coupling	IE-FCM-RJ45-C	1018790000	C.26
	FrontCom® Micro RJ45 module TIA-A printing	IE-FCM-RJ45-FJ-A	1018810000	C.26
	FrontCom® Micro RJ45 module TIA-B printing	IE-FCM-RJ45-FJ-B	1018820000	C.26

IP 67 flange data

	Description	Type	Order No.	See page
	Bayonet flange metal RJ45 coupling	IE-BS-V01M-RJ45-C	1963470000	C.35
	Bayonet flange metal RJ45 module TIA-A printing	IE-BS-V01M-RJ45-FJ-A	1963480000	C.35
	Bayonet flange plastic RJ45 coupling	IE-BS-V01P-RJ45-C	1012370000	C.41
	Bayonet flange metal RJ45 module TIA-A printing	IE-BS-V01P-RJ45-FJ-A	1012380000	C.41
	Bayonet flange metal SC-RJ POF / multimode	IE-BS-V01M-SCRJ-MM	1221010000	C.37
	Bayonet flange metal SC-RJ singlemode	IE-BS-V01M-SCRJ-SM	1221020000	C.37
	Bayonet flange protective cap IP 67	IE-BP-V01P	1965700000	C.37
	other inserts from page C.61			

IP 67 data connectors

	Description	Type	Order No.	See page
	Bayonet plug metal RJ45 crimped	IE-PS-V01M-RJ45-TH	1963140000	C.34
	Bayonet plug metal RJ45 tool-free	IE-PS-V01M-RJ45-FH	1963120000	C.34
	Bayonet plug plastic RJ45 crimped	IE-PS-V01P-RJ45-TH	1012470000	C.40
	Bayonet plug plastic RJ45 tool-free	IE-PS-V01P-RJ45-FH	1012490000	C.40
	Bayonet plug metal SC-RJ use POF	IE-PS-V01M-2SC-POF	1963280000	C.36
	Bayonet plug metal SC-RJ use multimode	IE-PS-V01M-2SC-MM	1963260000	C.36
	Bayonet plug metal SC-RJ use singlemode	IE-PS-V01M-2SC-SM	1963300000	C.36
	Bayonet plug protective cap IP 67	IE-PP-V01P	1965690000	C.36

IP 67 assembled data cables

	Description	Type	Order No.	See page
	Bayonet metal RJ 45 patch cable PUR 1 m	IE-C5ES8UG0010B41B41-E	1066850000	D.23
	Bayonet metal RJ 45 patch cable PUR 2 m	IE-C5ES8UG0020B41B41-E	1066860000	D.23
	Bayonet metal RJ 45 patch cable PUR 5 m	IE-C5ES8UG0050B41B41-E	1066870000	D.23
	Bayonet metal RJ 45 patch cable PUR 10 m	IE-C5ES8UG0100B41B41-E	1066880000	D.23
	Bayonet plastic RJ 45 patch cable PUR 1 m	IE-C5ES8UG0010P41P41-E	1106010000	D.23
	Bayonet plastic RJ 45 patch cable PUR 2 m	IE-C5ES8UG0020P41P41-E	1106020000	D.23
	Bayonet plastic RJ 45 patch cable PUR 5 m	IE-C5ES8UG0050P41P41-E	1106030000	D.23
	Bayonet plastic RJ 45 patch cable PUR 10 m	IE-C5ES8UG0100P41P41-E	1106040000	D.23
Other Ethernet/IP cables available on request				

IP 67 plug-in M12 connectors

M 12 components can be found from page C.58

IP 65 connection components

	Description	Type	Order No.	See page
	Single junction box, metal straight	IE-OM-V01M-K11-1S	1966300000	C.74
	Double junction box, metal straight	IE-OM-V01M-K21-2S	1966330000	C.74
	Double junction box, metal left	IE-OM-V01M-K21-2L	1966320000	C.74
	Double junction box, metal right	IE-OM-V01M-K21-2R	1966310000	C.74
	Single junction box, plastic	IE-OP-V01P-1S	1061830000	C.75
	Plastic cable coupling	IE-CC-V01P	1061820000	C.42
	RJ45 module TIA-A printing	IE-BI-RJ45-FJ-A	1962850000	C.62
	RJ45 module TIA-B printing	IE-BI-RJ45-FJ-B	1963840000	C.62

Bulk stock copper cable

	Description	Type	Order No.	See page
	100 m ring installation cable PVC Cat. 5 SF/UTP	IE-5IC4x2xAWG24/1-PVC	8813150000	D.6
	Bulk stock installation cable PVC Cat. 5 SF/UTP from 110 m	IE-C5CS8VG-MW	8953160000	D.6
	100 m ring installation cable PUR Cat. 5 SF/UTP	IE-5IC4x2xAWG24/1-PUR	8813160000	D.6
	Bulk stock installation cable PUR Cat. 5 SF/UTP from 110 m	IE-C5CS8UG-MW	8944310000	D.6
	100 m ring connection cable PVC Cat. 5 SF/UTP	IE-5CC4x2xAWG26/7-PVC	8813190000	D.8
	Bulk stock connection cable PVC Cat. 5 SF/UTP from 110 m	IE-C5ES8VG-MW	8955490000	D.8
	100 m ring connection cable PUR Cat. 5 SF/UTP	IE-5CC4x2xAWG26/7-PUR	8813200000	D.8
	Bulk stock connection cable PUR Cat. 5 SF/UTP from 110 m	IE-C5ES8UG-MW	8938880000	D.8
	Other Ethernet/IP cables available on request			

Bulk stock fibre-optic cable

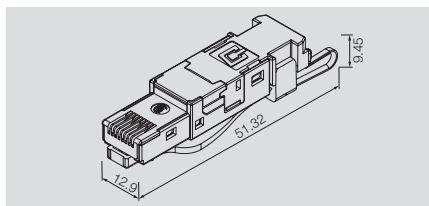
	Description	Type	Order No.	See page
	Multimode breakout cable 2x50 µm PUR from 50 m	IE-FM5B2UE-MW	8946000000	D.31
	POF zip-cord cable 2X980/1000 µm TPE, from 50 m	IE-FPOZ2EE-MW	1242820000	D.32
	POF breakout cable 2X980/1000 µm TPE, from 50 m	IE-FPOD2UE-MW	1172280000	D.32

IP20 plug-in connector

RJ45 plug

- Cat.6_A
- IP 20

tool-free



Technical data

Category
Degree of protection
Housing main material
Wire cross-section, flexible, min. / max.
Wire cross-section, flexible, min. / max.
Wire cross-section, solid, min. / max.
Wire cross-section, solid, min. / max.
Insulation cross-section, max.
Sheath diameter, min. / max.
Shielding
Plugging cycles
Configuration
Ambient temperature (operational), min. / max.
Connector standard
Current-carrying capacity at 50 °C

Note

Cat.6 _A / Class E _A (ISO/IEC 11801 2010)
IP 20
Zinc diecast
0.48 mm / 0.76 mm
AWG 26 / AWG 22
0.4 mm / 0.64 mm
AWG 24 / AWG 22
1.6 mm
5.5 mm / 8.5 mm
360° all-round enclosure
750
Eight-wire field-assembled RJ45 plug with colour coding on the plug, TIA A/B/ProfiNet, multiport-ready
-40 °C...+70 °C
IEC 60603-7-51
1 A

Ordering data

Plug
with tear-off flags: EIA / TIA 568 A/B/PROFINET
with printing: PROFINET
with printing: EIA / TIA 568 A
with printing: EIA / TIA 568 B

Note

Type	Qty.	Order No.
IE-PS-RJ45-FH-BK	10	1963600000
IE-PS-RJ45-FH-BK-P	10	1132060000
IE-PS-RJ45-FH-BK-A	10	1132040000
IE-PS-RJ45-FH-BK-B	10	1132050000

Accessories

Strain relief
blue
orange
green
grey
white
yellow



Tools

Optional pressing tool

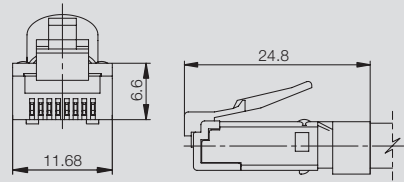
Type	Qty.	Order No.
IE-CR-IP20-RJ45-FH-BU	10	1963080000
IE-CR-IP20-RJ45-FH-OG	10	1963070000
IE-CR-IP20-RJ45-FH-GN	10	1963100000
IE-CR-IP20-RJ45-FH-GY	10	1963060000
IE-CR-IP20-RJ45-FH-WH	10	1963050000
IE-CR-IP20-RJ45-FH-YE	10	1963090000

PWZ RJ45	1	1118040000
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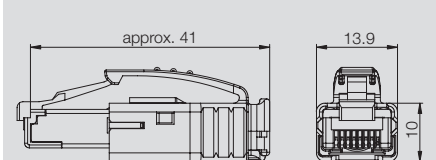
RJ45 plug

- Cat.6
- With kink prevention
- With protective mechanism for locking lever

Crimp / housing 1-part



Crimp / housing 2-part



Technical data

Category
Degree of protection
Wire cross-section, flexible, min. / max.
Wire cross-section, flexible, min. / max.
Wire cross-section, solid, min. / max.
Wire cross-section, solid, min. / max.
Insulation cross-section, max.
Sheath diameter, min. / max.
Shielding
Plugging cycles
Ambient temperature (operational), min. / max.
Connector standard
Bending protection sleeve material
Material insulator
Contact material / Contact surface
Shielding material
Cable pull-out force, min.
Contact resistance
Insulation resistance
Dielectric strength, contact / contact
Dielectric strength, contact / shield
Current-carrying capacity at 50 °C

Cat.6 _A / Class E _A (ISO/IEC 11801 2010)
IP 20
0.46 mm / 0.61 mm
AWG 27 / AWG 24
0.36 mm / 0.51 mm
AWG 27 / AWG 24
1.02 mm
6.2 mm / 7.1 mm
360° all-round enclosure
750
-40 °C...+70 °C
IEC 60603-7-51
Polyamide PA6, UL94-V0
PC UL 94 V-0
Phosphor bronze / gold-plated
0.5 mm brass, 2 µm nickel
89 N
≤ 20 mΩ
500 MΩ
≤ 1000 V DC
≤ 1500 V DC
1 A

Cat.6 _A / Class E _A (ISO/IEC 11801 2010)
IP 20
0.46 mm / 0.61 mm
AWG 27 / AWG 24
0.36 mm / 0.51 mm
AWG 27 / AWG 24
1.05 mm
5 mm / 7.3 mm
360° all-round enclosure
750
-40 °C...+70 °C
IEC 60603-7-51
Polycarbonate PC, UL94 V-0
PC UL 94 V-0
Phosphor bronze / gold-plated
0.5 mm brass, 2 µm nickel
89 N
≤ 20 mΩ
500 MΩ
≤ 1000 V DC
≤ 1500 V DC
1 A

Note

Ordering data

Plug	
	with kink prevention; 5,5 - 6,2 mm
	with kink prevention; 6,2 - 7,1 mm
	with kink prevention sleeve, black
	without kink prevention sleeve

Type	Qty.	Order No.
IE-P63	10	8813110000
IE-P70	10	8813120000

Type	Qty.	Order No.
IE-PS-RJ45-TH-BK	10	1963590000
IE-PM-RJ45-TH	100	1963580000

Note

Accessories

Kink prevention sleeve	
	blue
	orange
	black
	green
	grey
	white
	yellow



Tools



Crimping tool

Type	Qty.	Order No.
TT 8 RS MP 8	1	9202800000

Type	Qty.	Order No.
IE-PH-RJ45-TH-BU	10	1962470000
IE-PH-RJ45-TH-OG	10	1962450000
IE-PH-RJ45-TH-BK	10	1962500000
IE-PH-RJ45-TH-GN	10	1962490000
IE-PH-RJ45-TH-GY	10	1962440000
IE-PH-RJ45-TH-WH	10	1962430000
IE-PH-RJ45-TH-YE	10	1962480000
TT 8 RS MP 8	1	9202800000

IP20 plug-in connector

FO connector

- IP 20

SC-RJ



Technical data

Degree of protection
Plugging cycles
Ambient temperature (operational), min. / max.
Connector standard
Insertion loss (attenuation)
Return loss (attenuation)
Individual wire diameter, min. / max.
Crimp barrel material
Pressure spring material
Ferrule material
Dust protection cap material
Bending protection sleeve material
Cable pull-out force, min.
Housing main material
Housing material, insert
Humidity
Sheath diameter, min. / max.

Note

Ordering data

	Singlemode
	Multimode
	POF

Note

Accessories

Tools	
	Crimping pliers POF

IP 20
1000
-20 °C...+80 °C
IEC 61754-24
≤ 0.5 dB
≥ 40 dB
0.6 mm...1.4 mm
Copper, nickel-plated
Stainless steel
Zirconia, Hole 125.5 µm
TPE
TPE
100 N
PC UL 94 V0
Zinc diecast
0...93 % rel. humidity
2.8 mm / 3 mm

Type	Qty.	Order No.
IE-PS-SCRJ1-SM	10	1206740000
IE-PS-SCRJ1-MM	10	1206730000
IE-PS-SCRJ1-POF	10	1206720000

Type	Qty.	Order No.
HTX-IE-POF	1	1208870000

FO connector

- IP 20

SC Duplex



LC Duplex



Technical data

Degree of protection
Plugging cycles
Ambient temperature (operational), min. / max.
Connector standard
Insertion loss (attenuation)
Return loss (attenuation)
Individual wire diameter, min. / max.
Crimp barrel material
Pressure spring material
Ferrule material
Dust protection cap material
Bending protection sleeve material
Cable pull-out force, min.
Housing main material
Housing material, insert
Humidity
Sheath diameter, min. / max.

Note

IP 20
1000
-40 °C...+70 °C
IEC 61754-4
≤ 0.4 dB
≥ 30 dB
0.6 mm...1.4 mm
Copper, nickel-plated
Stainless steel
Zirconia, Hole 127 µm
TPE
TPE
100 N
PC UL 94 V0
Zinc diecast
0...93 % rel. humidity
2.8 mm / 3 mm

IP 20
1000
-40 °C...+70 °C
IEC 61754-20
≤ 0.4 dB
≥ 30 dB
0.6 mm...1.4 mm
Copper, nickel-plated
Stainless steel
Zirconia, Hole 127 µm
TPE
TPE
100 N
PC UL 94 V0
Zinc diecast
0...93 % rel. humidity
2.8 mm / 3 mm

Ordering data

Singlemode
Multimode

Type	Qty.	Order No.
IE-PS-SCD-SM	10	1964410000
IE-PS-SCD-MM	10	1964480000

Note

Accessories

Fibre-optic plug clip

SC duplex, multi-mode, beige



Type	Qty.	Order No.
IE-PB-SCD-MM	10	1962900000

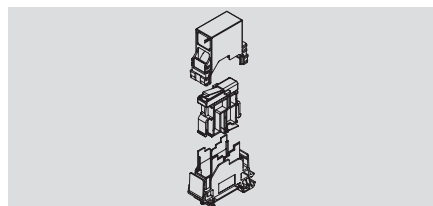
Type	Qty.	Order No.
IE-PS-LCD-SM	10	1962980000
IE-PS-LCD-MM	10	1962970000

IP20 mounting rail outlets

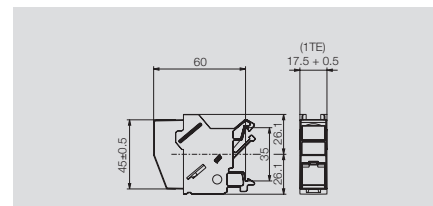
Coupling RJ45

- Cat.6_A
- IP 20
- TS35

Outlet direction straight



Outlet direction diagonal



Technical data

Category
Degree of protection
Housing main material
Colour
Type of mounting
Plugging cycles
Configuration

Ambient temperature (operational), min. / max.
Humidity
Shock resistance acc. to IEC 60512-4
Vibration resistance acc. to IEC 60512-4
Housing material, insert
Contact material / Contact surface
Connector standard

Electrical properties

PoE+
Contact resistance
Current-carrying capacity at 50 °C
Dielectric strength, contact / contact
Dielectric strength, contact / shield
Insulation resistance

Note

Cat.6_A / Class E_A (ISO/IEC 11801 2010)
IP 20
PA UL 94 V0
light grey
TS 35
750
Switchable voltage connection from module / coupling to mounting rail
-25 °C...+70 °C
0...93 % rel. humidity
250 ms⁻²
50 ms⁻² sinusoidal (9 – 500 Hz)
Zinc diecast
Spring steel, Ni 1.2 µm / AU ≥ 0.8 µm
IEC 60603-7-51

conforming to IEEE 802.3af
≤ 20 mΩ
1 A
≥ 1000 V DC
≥ 1500 V DC
500 MΩ

Cat.6 (ISO/IEC 11801)
IP 20
PA 66, UL 94: V-0
light grey
TS 35
750
Inspection window for labelling
1 TE pitch dimension acc. to DIN 43880, insta-compatible

IEC 60603-7-5

≤ 20 mΩ
1 A
≥ 1000 V DC
≥ 1500 V DC
500 MΩ

Ordering data

Type	Qty.	Order No.
IE-TO-RJ45-C	10	8946920000

Note

Type	Qty.	Order No.
IE-TO-RJ45-C	10	8946920000

Type	Qty.	Order No.
IE-XM-RJ45/RJ45	1	8879050000

Accessories

Labels	Type	Qty.	Order No.
	9*11 mm, blue	10	1964100000
	9*11 mm, green	10	1964120000
	9*11 mm, grey	10	1964080000
	9*11 mm, orange	10	1964090000
	9*11 mm, white	10	1964070000
	9*11 mm, yellow	10	1964110000
Markers			
	9*11 mm, white	200	1857440000
	Marking tag		

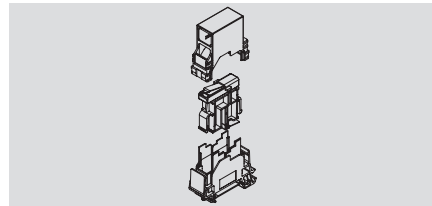
Type	Qty.	Order No.
LM MT DIN A5 9/11 BL	10	1964100000
LM MT DIN A5 9/11 GN	10	1964120000
LM MT DIN A5 9/11 GR	10	1964080000
LM MT DIN A5 9/11 OR	10	1964090000
LM MT DIN A5 9/11 WS	10	1964070000
LM MT DIN A5 9/11 GE	10	1964110000
ESG 9/11K MC NEUTRAL	200	1857440000

Type	Qty.	Order No.
IE-DM	50	8813500000

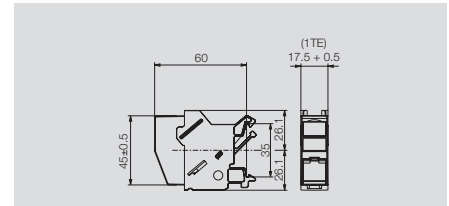
Module RJ45

- Cat.6_A
- IP 20
- TS35

Outlet direction straight



Outlet direction diagonal



Technical data

Category
Degree of protection
Housing main material
Colour
Type of mounting
Plugging cycles
Configuration

Ambient temperature (operational), min. / max.
Connector standard

Electrical properties

PoE+
Contact resistance
Current-carrying capacity at 50 °C
Dielectric strength, contact / contact
Dielectric strength, contact / shield
Insulation resistance
Wire cross-section, flexible, min. / max.
Wire cross-section, flexible, min. / max.
Wire cross-section, solid, min. / max.
Wire cross-section, solid, min. / max.

Note

Cat.6_A / Class E_A (ISO/IEC 11801 2010)
IP 20
PA UL 94 V0
light grey
TS 35
750
Switchable voltage connection from module / coupling to mounting rail
-25 °C...+70 °C
IEC 60603-7-51

conforming to IEEE 802.3af
≤ 20 mΩ
1 A
≥ 1000 V DC
≥ 1500 V DC
500 MΩ
AWG 26 / AWG 22
0.48 mm / 0.76 mm
AWG 24 / AWG 22
0.4 mm / 0.64 mm

Cat.6 (ISO/IEC 11801)
IP 20
PA 66, UL 94: V-0
light grey
TS 35
750
Inspection window for labelling
1 TE pitch dimension acc. to DIN 43880, insta-compatible
IEC 60603-7-5

≤ 20 mΩ
1 A
≥ 1000 V DC
≥ 1500 V DC
500 MΩ
AWG 26 / AWG 26
0.48 mm² / 0.48 mm²
AWG 24 / AWG 22
0.4 mm² / 0.64 mm²

Ordering data

Outlet RJ45 A-coded
Outlet RJ45 B-coded
Outlet RJ45 PROFINET-coded

Note

Type	Qty.	Order No.
IE-TO-RJ45-FJ-A	10	8946930000
IE-TO-RJ45-FJ-B	10	8946940000
IE-TO-RJ45-FJ-P	10	8946950000

Type	Qty.	Order No.
IE-XM-RJ45/DC	1	8808360000
IE-XM-RJ45/DC-B	1	8891980000

Accessories

Labels

9*11 mm, blue
9*11 mm, green
9*11 mm, grey
9*11 mm, orange
9*11 mm, white
9*11 mm, yellow



Markers

9*11 mm, white
Marking tag

Type	Qty.	Order No.
LM MT DIN A5 9/11 BL	10	1964100000
LM MT DIN A5 9/11 GN	10	1964120000
LM MT DIN A5 9/11 GR	10	1964080000
LM MT DIN A5 9/11 OR	10	1964090000
LM MT DIN A5 9/11 WS	10	1964070000
LM MT DIN A5 9/11 GE	10	1964110000

ESG 9/11K MC NEUTRAL	200	1857440000
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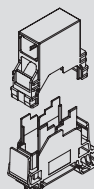
Type	Qty.	Order No.

IE-DM	50	8813500000
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IP20 mounting rail outlets

Coupling USB

Outlet direction straight



Technical data

Degree of protection
Housing main material
Colour
Type of mounting
Ambient temperature (operational), min. / max.
Connector standard
Connection 1 / 2

IP 20
PA UL 94 V0
light grey
TS 35
-25 °C...+70 °C
IEC 61076-3-107
USB A / USB A

Note

Ordering data

USB

Type	Qty.	Order No.
IE-TO-USB	10	8946960000

Note

Accessories

Labels



9*11 mm, blue
9*11 mm, green
9*11 mm, grey
9*11 mm, orange
9*11 mm, white
9*11 mm, yellow

Markers

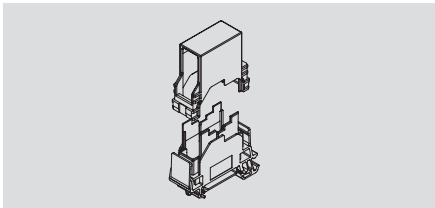
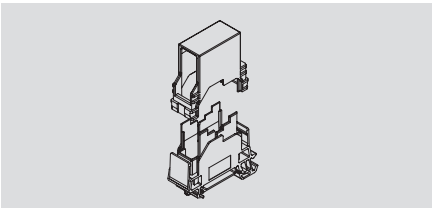
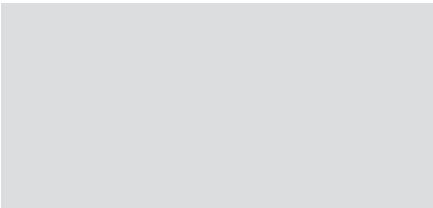
9*11 mm, white

Type	Qty.	Order No.
LM MT DIN A5 9/11 BL	10	1964100000
LM MT DIN A5 9/11 GN	10	1964120000
LM MT DIN A5 9/11 GR	10	1964080000
LM MT DIN A5 9/11 OR	10	1964090000
LM MT DIN A5 9/11 WS	10	1964070000
LM MT DIN A5 9/11 GE	10	1964110000
ESG 9/11K MC NEUTRAL	200	1857440000

Coupling fibre-optic

SC duplex

SC-RJ



Technical data

Degree of protection
Housing main material
Colour
Type of mounting
Plugging cycles
Ambient temperature (operational), min. / max.
Connector standard

Note

IP 20
PA UL 94 V0
light grey
TS 35
1000
-25 °C...+70 °C
IEC 61754-4

IP 20
PA UL 94 V0
light grey
TS 35
1000
-25 °C...+70 °C
IEC 61754-24

Ordering data

Fibre-optic
Singlemode
Multimode/POF

Note

Type	Qty.	Order No.
IE-TO-SCD-SM	10	8946980000
IE-TO-SCD-MM	10	8946970000

Type	Qty.	Order No.
IE-TO-SCRJ-SM	10	8947000000
IE-TO-SCRJ-MM	10	8946990000

Accessories

Labels
9*11 mm, blue
9*11 mm, green
9*11 mm, grey
9*11 mm, orange
9*11 mm, white
9*11 mm, yellow



Markers

9*11 mm, white

Type	Qty.	Order No.
LM MT DIN A5 9/11 BL	10	1964100000
LM MT DIN A5 9/11 GN	10	1964120000
LM MT DIN A5 9/11 GR	10	1964080000
LM MT DIN A5 9/11 OR	10	1964090000
LM MT DIN A5 9/11 WS	10	1964070000
LM MT DIN A5 9/11 GE	10	1964110000

ESG 9/11K MC NEUTRAL	200	1857440000
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Type	Qty.	Order No.
LM MT DIN A5 9/11 BL	10	1964100000
LM MT DIN A5 9/11 GN	10	1964120000
LM MT DIN A5 9/11 GR	10	1964080000
LM MT DIN A5 9/11 OR	10	1964090000
LM MT DIN A5 9/11 WS	10	1964070000
LM MT DIN A5 9/11 GE	10	1964110000

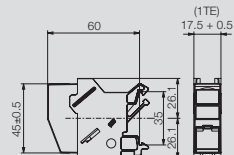
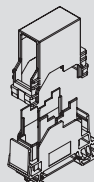
ESG 9/11K MC NEUTRAL	200	1857440000
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IP20 mounting rail outlets

Coupling fibre-optic

LC Duplex

ST



Technical data

Degree of protection
Housing main material
Colour
Type of mounting
Plugging cycles
Ambient temperature (operational), min. / max.
Connector standard

Note

IP 20
PA UL 94 V0
light grey
TS 35
1000
-25 °C...+70 °C
IEC 61754-20

IP 20
PA 66, UL 94: V-0
light grey
TS 35
750

IEC 61754-2

Ordering data

Singlemode
Multimode

Note

Type	Qty.	Order No.
IE-TO-LCD-SM	10	8947020000
IE-TO-LCD-MM	10	8947010000

Type	Qty.	Order No.
IE-XM-ST/ST	1	8808340000

Accessories

Labels

9*11 mm, blue
9*11 mm, green
9*11 mm, grey
9*11 mm, orange
9*11 mm, white
9*11 mm, yellow



Markers

Marking tag
9*11 mm, white

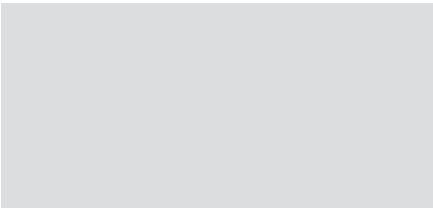
Type	Qty.	Order No.
LM MT DIN A5 9/11 BL	10	1964100000
LM MT DIN A5 9/11 GN	10	1964120000
LM MT DIN A5 9/11 GR	10	1964080000
LM MT DIN A5 9/11 OR	10	1964090000
LM MT DIN A5 9/11 WS	10	1964070000
LM MT DIN A5 9/11 GE	10	1964110000

ESG 9/11K MC NEUTRAL	200	1857440000
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Type	Qty.	Order No.
IE-DM	50	8813500000

RJ45

- Cat.6_A
- IP 20



Technical data

Category
Degree of protection
Housing main material
Colour
Plugging cycles
Ambient temperature (operational), min. / max.
Note

Ordering data

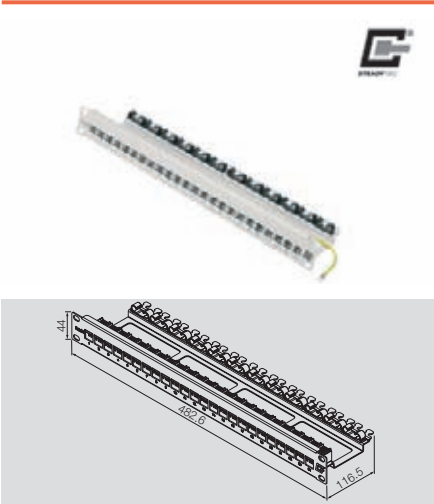
19" Patch Panel
with 24 RJ45 couplings
with 24 RJ45 modules A
with 24 RJ45 modules B
with 24 RJ45 adapters, without inserts
Note

Accessories

Flange insert
RJ45 EIA/TIA 568 A
RJ45 EIA/TIA 568 B
RJ45 PROFINET
USB coupling, type A



RJ45



Cat.6 _A / Class E _A (ISO/IEC 11801 2010)
IP 20
Powder-coated steel sheet
light grey
750
-40 °C...+70 °C

Type	Qty.	Order No.
IE-PPA19-24P-RJ45-C	1	1049930000
IE-PPA19-24P-RJ45-FJ-A	1	1049910000
IE-PPA19-24P-RJ45-FJ-B	1	1049920000
IE-PPA19-24P	1	1049270000

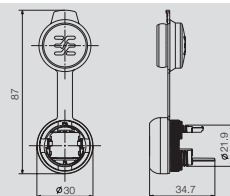
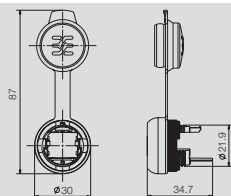
Type	Qty.	Order No.
IE-BI-RJ45-FJ-A	10	1962850000
IE-BI-RJ45-FJ-B	10	1963840000
IE-BI-RJ45-FJ-P	10	1963830000
IE-BI-USB-A	10	1019570000

IP 65 FrontCom® Micro service interface

FrontCom® Micro RJ45

Module

Coupling



Technical data

Category
Degree of protection
Housing main material
Colour
Shielding
Type of mounting
Plugging cycles
Connector standard
Connection 1 / 2
Dust protection cap material

Note

Cat.6_A / Class E_A (ISO/IEC 11801 2010)
IP 65 according to DIN EN 60529
PA UL 94 V0
black
360° shield contact
Cabinet, Distribution box
750
IEC 60603-7-51
RJ45 / IDC
EPDM

Cat.6_A / Class E_A (ISO/IEC 11801 2010)
IP 65 according to DIN EN 60529
PA UL 94 V0
black
360° shield contact
Cabinet, Distribution box
750
IEC 60603-7-51
RJ45 / RJ45
EPDM

Ordering data

PROFINET module
TIA-A module
TIA-B module
Coupling

Type	Qty.	Order No.
IE-FCM-RJ45-FJ-P	10	1018830000
IE-FCM-RJ45-FJ-A	10	1018810000
IE-FCM-RJ45-FJ-B	10	1018820000

Type	Qty.	Order No.
IE-FCM-RJ45-C	10	1018790000

Note

Accessories

Fixing tool



Markers



SwitchMark markers, white
SwitchMark holder

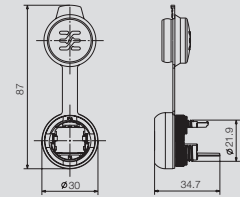
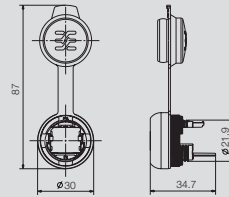
Type	Qty.	Order No.
IE-FISP-V4	2	9204370000
SM 27/18 NEUTRAL WS	80	1699860000
SM-H 27/18 SW	25	1716630000

Type	Qty.	Order No.
IE-FISP-V4	2	9204370000
SM 27/18 NEUTRAL WS	80	1699860000
SM-H 27/18 SW	25	1716630000

FrontCom® Micro USB

Coupling AA

Coupling AB



Technical data

Operating temperature
Degree of protection
Housing main material
Colour
Shielding
Type of mounting
Connector standard
Connection 1 / 2
Dust protection cap material

-40 °C...+70 °C
IP 65 according to DIN EN 60529
PA UL 94 V0
black
360° shield contact
Cabinet, Distribution box
IEC 61076-3-107
USB A / USB A
EPDM

-40 °C...+70 °C
IP 65 according to DIN EN 60529
PA UL 94 V0
black
360° shield contact
Cabinet, Distribution box
IEC 61076-3-107
USB A / USB B
EPDM

Note

Ordering data

Note

Accessories

Fixing tool



Markers



SwitchMark markers, white
SwitchMark holder

Type	Qty.	Order No.
IE-FCM-USB-A	10	1018840000

Type	Qty.	Order No.
IE-FCM-USB-AB	10	1222550000

Type	Qty.	Order No.
IE-FISP-V4	2	9204370000

Type	Qty.	Order No.
IE-FISP-V4	2	9204370000

SM 27/18 NEUTRAL WS	80	1699860000
SM-H 27/18 SW	25	1716630000

SM 27/18 NEUTRAL WS	80	1699860000
SM-H 27/18 SW	25	1716630000

IP67 plug-in connector

Plug PushPull V14 - RJ45

- 8-wire, on-site-assembled RJ45 plug with colour-coding on plug

With kink prevention

Tear-off flags with TIA-A/-B/PROFINET



Without kink prevention

PROFINET printing



Technical data

Degree of protection
Housing main material
Sheath diameter, min. / max.
Plugging cycles
Ambient temperature (operational), min. / max.
Connector standard
Wire cross-section, flexible, min. / max.
Wire cross-section, flexible, min. / max.
Wire cross-section, solid, min. / max.
Wire cross-section, solid, min. / max.

Note

IP 67
Zinc diecast
5 mm / 10 mm
750
-40 °C...+70 °C
IEC 61076-3-117 Var. 14, IEC 60603-7-51
AWG 26 / AWG 22
0.48 mm / 0.76 mm
AWG 24 / AWG 22
0.4 mm² / 0.64 mm²

IP 67
Zinc diecast
5 mm / 10 mm
750
-40 °C...+70 °C
IEC 61076-3-117 Var. 14, IEC 60603-7-51
AWG 26 / AWG 22
0.48 mm / 0.76 mm
AWG 24 / AWG 22
0.4 mm² / 0.64 mm²

Ordering data - Sets

RJ45 tool-free

Note

Type	Qty.	Order No.
IE-PS-V14M-RJ45-FH-BP	10	1012090000

Type	Qty.	Order No.
IE-PS-V14M-RJ45-FH-P	10	1012170000

Ordering data - Empty housings

Note

Type	Qty.	Order No.
IE-PH-V14M-RJ-BP	10	1011570000

Type	Qty.	Order No.
IE-PH-V14M-RJ	10	1011560000

Accessories

Colour coding



blue
orange
green
grey
white
yellow

Dust protection cap



Type	Qty.	Order No.
IE-CR-IP67-WS20-BU	10	1963020000
IE-CR-IP67-WS20-OG	10	1963010000
IE-CR-IP67-WS20-GN	10	1963040000
IE-CR-IP67-WS20-GY	10	1963000000
IE-CR-IP67-WS20-WH	10	1962990000
IE-CR-IP67-WS20-YE	10	1963030000

IE-PP-V14P	10	1058280000
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Type	Qty.	Order No.
IE-CR-IP67-WS20-BU	10	1963020000
IE-CR-IP67-WS20-OG	10	1963010000
IE-CR-IP67-WS20-GN	10	1963040000
IE-CR-IP67-WS20-GY	10	1963000000
IE-CR-IP67-WS20-WH	10	1962990000
IE-CR-IP67-WS20-YE	10	1963030000

IE-PP-V14P	10	1058280000
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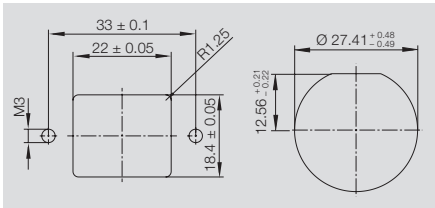
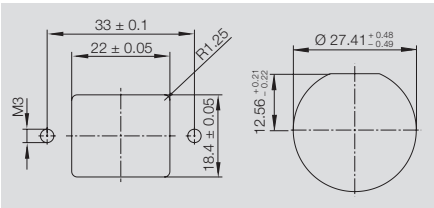
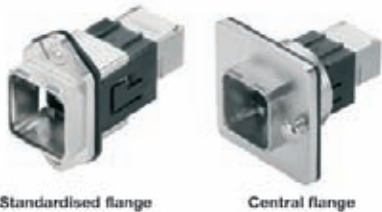
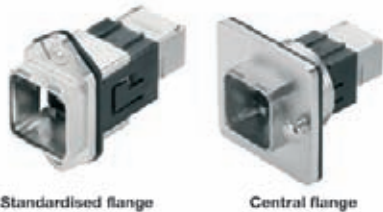
Plug inserts can also be ordered separately. Refer to Inserts.

Plug inserts can also be ordered separately. Refer to Inserts.

Flange PushPull V14 - RJ45

Module

Coupling



Technical data

Degree of protection
Housing main material
Sheath diameter, min. / max.
Plugging cycles
Ambient temperature (operational), min. / max.
Connector standard
Wire cross-section, flexible, min. / max.
Wire cross-section, flexible, min. / max.
Wire cross-section, solid, min. / max.
Wire cross-section, solid, min. / max.

Note

IP 67
Zinc diecast
5 mm / 10 mm
750
-40 °C...+70 °C
IEC 61076-3-117 Var. 14, IEC 60603-7-51
AWG 26 / AWG 22
0.48 mm / 0.76 mm
AWG 24 / AWG 22
0.4 mm / 0.64 mm

IP 67
Zinc diecast
5 mm / 10 mm
750
-40 °C...+70 °C
IEC 61076-3-117 Var. 14, IEC 60603-7-51

Ordering data - Sets

Standardised flange, PROFINET
Standardised flange
Central flange TIA-A
Central flange

Note

Type	Qty.	Order No.
IE-BSS-V14M-RJ45-FJ-P	10	1085260000
IE-BSC-V14M-RJ45-FJ-A	10	1058270000

Type	Qty.	Order No.
IE-BSS-V14M-RJ45-C	10	1012310000
IE-BSC-V14M-RJ45-C	10	1058250000

Ordering data - Empty housings

Central flange
Device flange
Standardised flange

Note

Type	Qty.	Order No.
IE-BHC-V14M-RJA	10	1047950000
IE-BHD-V14M	10	1047940000
IE-BHS-V14M-RJA	10	1011540000

Type	Qty.	Order No.
IE-BHC-V14M-RJA	10	1047950000
IE-BHD-V14M	10	1047940000
IE-BHS-V14M-RJA	10	1011540000

Accessories

Dust protection cap



Type	Qty.	Order No.
IE-BP-V14P	10	1058310000

Type	Qty.	Order No.
IE-BP-V14P	10	1058310000

Plug inserts can also be ordered separately. Refer to Inserts.

Plug inserts can also be ordered separately. Refer to Inserts.

IP67 plug-in connector

Plug PushPull V14 - hybrid

Without kink prevention



Technical data

Category
Degree of protection
Housing main material
Sheath diameter, min. / max.
Plugging cycles
Ambient temperature (operational), min. / max.
Connection 1 / 2
Connector standard
Wire cross-section, flexible, min. / max.
Wire cross-section, flexible, min. / max.
Rated current
Volume resistance

Note

Cat.5 (ISO/IEC 11801)
IP 67
Zinc diecast
5 mm / 10 mm
500
-40 °C...+70 °C
Hybrid (Q10) / Crimp
IEC 61076-3-117 Var. 14
AWG 27 / AWG 20
0.08 mm² / 0.75 mm²
3 A per contact
< 10 mΩ

Ordering data - Sets

Note

Type	Qty.	Order No.
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IE-PS-V14M-HYB-10P	10	1072910000
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Order contacts separately

Ordering data - Empty housings

Note

Type	Qty.	Order No.
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IE-PH-V14M-RJ	10	1011560000
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Accessories

Crimp contacts



0,33...0,5 mm²

0,75 mm²

0,08...0,2 mm²

Crimping tool



Cable

Hybrid cable

Dust protection cap



Type	Qty.	Order No.
IE-PIC-HYB-S-0,5-300	300	1096180000
IE-PIC-HYB-S-0,75-300	300	1068950000
IE-PIC-HYB-S-0,2-300	300	1135150000

HTF HYB	1	1119580000
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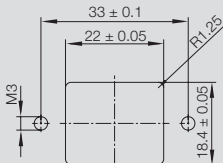
IE-C5DHAG-MW	1	1172250000
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IE-PP-V14P	10	1058280000
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Plug inserts can also be ordered separately. Refer to Inserts.

Flange PushPull V14 - hybrid

Standardised flange



Technical data

Category	Cat.5 (ISO/IEC 11801)
Degree of protection	IP 67
Housing main material	Zinc diecast
Sheath diameter, min. / max.	5 mm / 10 mm
Plugging cycles	500
Ambient temperature (operational), min. / max.	-40 °C...+70 °C
Connection 1 / 2	Hybrid (Q10) / Crimp
Connector standard	IEC 61076-3-117 Var. 14
Wire cross-section, flexible, min. / max.	AWG 27 / AWG 20
Wire cross-section, flexible, min. / max.	0.08 mm² / 0.75 mm²
Rated current	3 A per contact
Volume resistance	< 10 mΩ
Note	

Ordering data - Sets

Type	Qty.	Order No.
IE-BSS-V14M-HYB-10P-FJ	10	1072900000
Order contacts separately		

Ordering data - Empty housings

		Type	Qty.	Order No.
	Standardised flange	IE-BHS-V14M-RJA	10	1011540000
Note				

Accessories

Crimp contacts		Type	Qty.	Order No.
	0,33...0,5 mm²	IE-BIC-HYB-P-0,5-300	300	1096150000
	0,75 mm²	IE-BIC-HYB-P-0,75-300	300	1068970000
	0,08...0,2 mm²	IE-BIC-HYB-P-0,2-300	300	1135160000
Crimping tool		HTF HYB	1	1119580000
Cable		IE-C5DHAG-MW	1	1172250000
Hybrid cable				
Dust protection cap		IE-BP-V14P	10	1058310000

Plug inserts can also be ordered separately. Refer to Inserts.

IP67 plug-in connector

Plug PushPull V14 - fibre-optic

With kink prevention

Without kink prevention



Technical data

Degree of protection
Housing main material
Sheath diameter, min. / max.
Plugging cycles
Ambient temperature (operational), min. / max.
Connector standard
Insertion loss (attenuation)

Note

IP 67
Zinc diecast
5 mm / 10 mm
750
-40 °C...+70 °C
IEC 61076-3-117 Var. 14

IP 67
Zinc diecast
5 mm / 10 mm
750
-40 °C...+70 °C
IEC 61076-3-117 Var. 14, IEC 61754-24
1.5 dB

Ordering data - Sets

POF

Note

Type	Qty.	Order No.
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Type	Qty.	Order No.
IE-PS-V14M-2SC-POF	1	1191550000

Ordering data - Empty housings

Note

Type	Qty.	Order No.
IE-PH-V14M-FO-BP	10	1058110000

Only empty housings; order inserts separately

Type	Qty.	Order No.
IE-PH-V14M-FO	10	1058100000

Accessories

Inserts



Singlemode
Multimode
POF

Colour coding



blue
orange
green
grey
white
yellow

Dust protection cap



Plug housing protective cap

Type	Qty.	Order No.
IE-PI-SCRJ-SM	10	1067390000
IE-PI-SCRJ-MM	10	1067380000
IE-PI-SCRJ-POF	10	1067410000

IE-CR-IP67-WS20-BU	10	1963020000
IE-CR-IP67-WS20-OG	10	1963010000
IE-CR-IP67-WS20-GN	10	1963040000
IE-CR-IP67-WS20-GY	10	1963000000
IE-CR-IP67-WS20-WH	10	1962990000
IE-CR-IP67-WS20-YE	10	1963030000

IE-PP-V01P	10	1965690000
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Type	Qty.	Order No.
IE-PI-SCRJ-SM	10	1067390000
IE-PI-SCRJ-MM	10	1067380000
IE-PI-SCRJ-POF	10	1067410000

IE-CR-IP67-WS20-BU	10	1963020000
IE-CR-IP67-WS20-OG	10	1963010000
IE-CR-IP67-WS20-GN	10	1963040000
IE-CR-IP67-WS20-GY	10	1963000000
IE-CR-IP67-WS20-WH	10	1962990000
IE-CR-IP67-WS20-YE	10	1963030000

IE-PP-V01P	10	1965690000
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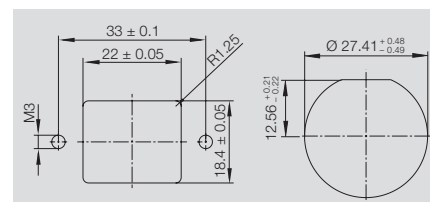
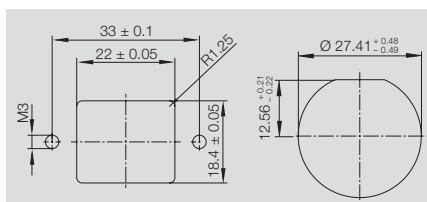
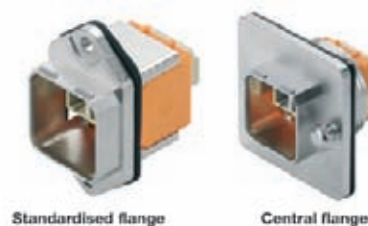
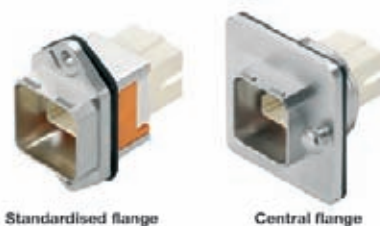
Plug inserts can also be ordered separately. Refer to Inserts.

Plug inserts can also be ordered separately. Refer to Inserts.

Flange PushPull V14 - fibre-optic

SC-RJ

LC Duplex



Technical data

Degree of protection
Housing main material
Plugging cycles
Ambient temperature (operational), min. / max.
Insertion loss (attenuation)
Connector standard

Note

IP 67
Zinc diecast
500
-40 °C...+70 °C
< 0.2 dB
IEC 61076-3-117 Var. 14, IEC 61754-24

IP 67
Zinc diecast
500
-40 °C...+70 °C
< 0.2 dB
IEC 61076-3-117 Var. 14, IEC 61754-20

Ordering data - Sets

Central flange Singlemode
Standardised flange Singlemode
Central flange Multimode/POF
Standardised flange Multimode/POF

Note

Type	Qty.	Order No.
IE-BSC-V14M-SCRJ-SM-C	10	1062600000
IE-BSS-V14M-SCRJ-SM-C	10	1058140000
IE-BSC-V14M-SCRJ-MM-C	10	1062590000
IE-BSS-V14M-SCRJ-MM-C	10	1058120000

Type	Qty.	Order No.
IE-BSC-V14M-LCD-SM-C	10	1062620000
IE-BSS-V14M-LCD-SM-C	10	1058150000
IE-BSC-V14M-LCD-MM-C	10	1062610000
IE-BSS-V14M-LCD-MM-C	10	1058130000

Ordering data - Empty housings

Device flange

Note

Type	Qty.	Order No.
IE-BHD-V14M	10	1047940000

Type	Qty.	Order No.
IE-BHD-V14M	10	1047940000

Accessories

Dust protection cap



Type	Qty.	Order No.
IE-BP-V14P	10	1058310000

Type	Qty.	Order No.
IE-BP-V14P	10	1058310000

Plug inserts can also be ordered separately. Refer to Inserts.

Plug inserts can also be ordered separately. Refer to Inserts.

IP67 plug-in connector

Plug bayonet V1 metal - RJ45

With kink prevention

Without kink prevention



Technical data

Degree of protection
Housing main material
Sheath diameter, min. / max.
Plugging cycles
Ambient temperature (operational), min. / max.
Wire cross-section, flexible, min. / max.
Wire cross-section, flexible, min. / max.
Wire cross-section, solid, min. / max.
Wire cross-section, solid, min. / max.
Connector standard

Note

IP 67
Zinc diecast
5 mm / 10 mm
750
-40 °C...+70 °C
AWG 27 / AWG 24
0.46 mm / 0.61 mm
AWG 24 / AWG 22
0.36 mm / 0.51 mm
IEC 61076-3-106 Var. 1, IEC 60603-7-51

IP 67
Zinc diecast
5 mm / 10 mm
750
-40 °C...+70 °C
AWG 27 / AWG 24
0.46 mm / 0.61 mm
AWG 24 / AWG 22
0.36 mm / 0.51 mm
IEC 61076-3-106 Var. 1, IEC 60603-7-51

Ordering data - Sets

RJ45 tool-free, AWG 26-22, TIA-A/-B/-PROFINET
RJ45 Crimp, AWG 27-24

Note

Type	Qty.	Order No.
IE-PS-V01M-RJ45-FH-BP	10	1963130000
IE-PS-V01M-RJ45-TH-BP	10	1963150000

Type	Qty.	Order No.
IE-PS-V01M-RJ45-FH	10	1963120000
IE-PS-V01M-RJ45-TH	10	1963140000

Ordering data - Empty housings

Note

Type	Qty.	Order No.
IE-PH-V01M-BP	10	1962560000

Type	Qty.	Order No.
IE-PH-V01M	10	1962550000

Accessories

Colour coding



blue
orange
green
grey
white
yellow

Dust protection cap



Plug housing protective cap

Type	Qty.	Order No.
IE-CR-IP67-WS20-BU	10	1963020000
IE-CR-IP67-WS20-OG	10	1963010000
IE-CR-IP67-WS20-GN	10	1963040000
IE-CR-IP67-WS20-GY	10	1963000000
IE-CR-IP67-WS20-WH	10	1962990000
IE-CR-IP67-WS20-YE	10	1963030000

IE-PP-V01P	10	1965690000
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Type	Qty.	Order No.
IE-CR-IP67-WS20-BU	10	1963020000
IE-CR-IP67-WS20-OG	10	1963010000
IE-CR-IP67-WS20-GN	10	1963040000
IE-CR-IP67-WS20-GY	10	1963000000
IE-CR-IP67-WS20-WH	10	1962990000
IE-CR-IP67-WS20-YE	10	1963030000

IE-PP-V01P	10	1965690000
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Plug inserts can also be ordered separately. Refer to Inserts.

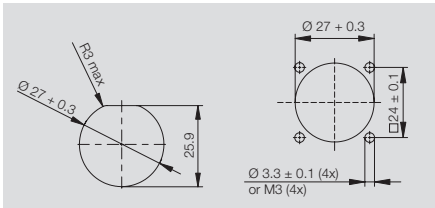
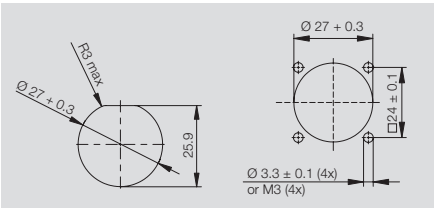
Plug inserts can also be ordered separately. Refer to Inserts.

Flange bayonet V1 metal - RJ45

Module

Coupling

TIA-A



Technical data

Degree of protection
Housing main material
Plugging cycles
Ambient temperature (operational), min. / max.
Connector standard
Wire cross-section, flexible, min. / max.
Wire cross-section, flexible, min. / max.
Wire cross-section, solid, min. / max.
Wire cross-section, solid, min. / max.

Note

IP 67
Zinc diecast
750
-40 °C...+70 °C
IEC 61076-3-106 Var. 1, IEC 60603-7-51
AWG 26 / AWG 22
0.48 mm / 0.76 mm
AWG 24 / AWG 22
0.4 mm / 0.64 mm

IP 67
Zinc diecast
750
-40 °C...+70 °C
IEC 61076-3-106 Var. 1, IEC 60603-7-51

Ordering data - Sets

Note

Type	Qty.	Order No.
IE-BS-V01M-RJ45-FJ-A	10	1963480000

Type	Qty.	Order No.
IE-BS-V01M-RJ45-C	10	1963470000

Ordering data - Empty housings

Note

Type	Qty.	Order No.
IE-BH-V01M	10	1963540000

Type	Qty.	Order No.
IE-BH-V01M	10	1963540000

Accessories

Dust protection cap



Flange-mounted housing, protective cap

Type	Qty.	Order No.
IE-BP-V01P	10	1965700000

Type	Qty.	Order No.
IE-BP-V01P	10	1965700000

Plug inserts can also be ordered separately. Refer to Inserts.

Plug inserts can also be ordered separately. Refer to Inserts.

IP67 plug-in connector

Plug bayonet V1 metal -
fibre-optic-SC

With kink prevention



Without kink prevention



Technical data

Degree of protection
Housing main material
Sheath diameter, min. / max.
Plugging cycles
Ambient temperature (operational), min. / max.
Connector standard
Insertion loss (attenuation)
Return loss (attenuation)

Note

IP 67
Zinc diecast
5 mm / 10 mm
500
-40 °C...+70 °C
IEC 61076-3-106 Var. 1, IEC 61754-24
0.5 dB singlemode; 0.4 dB multimode; 1.5 dB POF
40 dB singlemode; 30 dB multimode

IP 67
Zinc diecast
5 mm / 10 mm
500
-40 °C...+70 °C
IEC 61076-3-106 Var. 1, IEC 61754-24
0.5 dB singlemode; 0.4 dB multimode; 1.5 dB POF
40 dB singlemode; 30 dB multimode

Ordering data - Sets

Type	Qty.	Order No.
Singlemode	10	1963310000
Multimode	10	1963270000
POF	10	1963290000

Note

Type	Qty.	Order No.
IE-PS-V01M-2SC-SM-BP	10	1963310000
IE-PS-V01M-2SC-MM-BP	10	1963270000
IE-PS-V01M-2SC-POF-BP	10	1963290000

Type	Qty.	Order No.
IE-PS-V01M-2SC-SM	10	1963300000
IE-PS-V01M-2SC-MM	10	1963260000
IE-PS-V01M-2SC-POF	10	1963280000

Ordering data - Empty housings

Type	Qty.	Order No.
IE-PH-V01M-BP	10	1962560000

Note

Type	Qty.	Order No.
IE-PH-V01M-BP	10	1962560000

Type	Qty.	Order No.
IE-PH-V01M	10	1962550000

Accessories

Colour coding	Type	Qty.	Order No.
blue	IE-CR-IP67-WS20-BU	10	1963020000
orange	IE-CR-IP67-WS20-OG	10	1963010000
green	IE-CR-IP67-WS20-GN	10	1963040000
grey	IE-CR-IP67-WS20-GY	10	1963000000
white	IE-CR-IP67-WS20-WH	10	1962990000
yellow	IE-CR-IP67-WS20-YE	10	1963030000

Tools

Type	Qty.	Order No.
POF tool set	1	1208930000
Fibre-optic tool case	1	1032030000

Dust protection cap

Type	Qty.	Order No.
IE-PP-V01P	10	1965690000

Type	Qty.	Order No.
IE-CR-IP67-WS20-BU	10	1963020000
IE-CR-IP67-WS20-OG	10	1963010000
IE-CR-IP67-WS20-GN	10	1963040000
IE-CR-IP67-WS20-GY	10	1963000000
IE-CR-IP67-WS20-WH	10	1962990000
IE-CR-IP67-WS20-YE	10	1963030000

Type	Qty.	Order No.
TOOL SET IE-POF	1	1208930000
IE-CTC-SCST-GOF	1	1032030000

Type	Qty.	Order No.
IE-PP-V01P	10	1965690000

Type	Qty.	Order No.
IE-CR-IP67-WS20-BU	10	1963020000
IE-CR-IP67-WS20-OG	10	1963010000
IE-CR-IP67-WS20-GN	10	1963040000
IE-CR-IP67-WS20-GY	10	1963000000
IE-CR-IP67-WS20-WH	10	1962990000
IE-CR-IP67-WS20-YE	10	1963030000

Type	Qty.	Order No.
TOOL SET IE-POF	1	1208930000
IE-CTC-SCST-GOF	1	1032030000

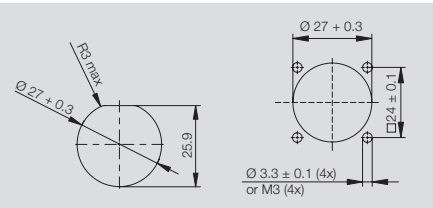
Type	Qty.	Order No.
IE-PP-V01P	10	1965690000

Plug inserts can also be ordered separately. Refer to Inserts.

Plug inserts can also be ordered separately. Refer to Inserts.

Flange bayonet V1 metal - fibre-optic-SC

Standardised flange



Technical data

Degree of protection
Housing main material
Plugging cycles
Ambient temperature (operational), min. / max.
Connector standard

IP 67
Zinc diecast
500
-40 °C...+70 °C
IEC 61076-3-106 Var. 1, IEC 61754-24

Note

Ordering data - Sets

Singlemode
Multimode/POF

Type	Qty.	Order No.
IE-BS-V01M-SCRJ-SM	10	1221020000
IE-BS-V01M-SCRJ-MM	10	1221010000

Note

Ordering data - Empty housings

Type	Qty.	Order No.
IE-BHD-V01M-SCA	10	1221030000

Note

Accessories

Dust protection cap



Flange-mounted housing, protective cap

Type	Qty.	Order No.
IE-BP-V01P	10	1965700000

Plug inserts can also be ordered separately. Refer to Inserts.

IP67 plug-in connector

Plug bayonet V1 metal -
fibre-optic-LC

With kink prevention

Without kink prevention



Technical data

Degree of protection
Housing main material
Sheath diameter, min. / max.
Plugging cycles
Ambient temperature (operational), min. / max.
Connector standard
Insertion loss (attenuation)
Return loss (attenuation)

Note

IP 67
Zinc diecast
5 mm / 10 mm
500
-40 °C...+70 °C
IEC 61076-3-106 Var. 1, IEC 61754-20
0.5 dB singlemode; 0.4 dB multimode; 1.5 dB POF
40 dB Singlemode; 30 dB multimode

IP 67
Zinc diecast
5 mm / 10 mm
500
-40 °C...+70 °C
IEC 61076-3-106 Var. 1, IEC 61754-20
0.5 dB singlemode; 0.4 dB multimode; 1.5 dB POF
40 dB singlemode; 30 dB multimode

Ordering data - Sets

Singlemode
Multimode

Note

Type	Qty.	Order No.
IE-PS-V01M-2LC-SM-BP	10	1963250000
IE-PS-V01M-2LC-MM-BP	10	1963230000

Type	Qty.	Order No.
IE-PS-V01M-2LC-SM	10	1963240000
IE-PS-V01M-2LC-MM	10	1963220000

Ordering data - Empty housings

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Note

Type	Qty.	Order No.
IE-PH-V01M-BP	10	1962560000

Type	Qty.	Order No.
IE-PH-V01M	10	1962550000

Accessories

Colour coding
blue
orange
green
grey
white
yellow



Tools



Fibre-optic tool case

Dust protection cap



Plug housing protective cap

Type	Qty.	Order No.
IE-CR-IP67-WS20-BU	10	1963020000
IE-CR-IP67-WS20-OG	10	1963010000
IE-CR-IP67-WS20-GN	10	1963040000
IE-CR-IP67-WS20-GY	10	1963000000
IE-CR-IP67-WS20-WH	10	1962990000
IE-CR-IP67-WS20-YE	10	1963030000

IE-CTC-SCST-GOF	1	1032030000
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IE-PP-V01P	10	1965690000
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Type	Qty.	Order No.
IE-CR-IP67-WS20-BU	10	1963020000
IE-CR-IP67-WS20-OG	10	1963010000
IE-CR-IP67-WS20-GN	10	1963040000
IE-CR-IP67-WS20-GY	10	1963000000
IE-CR-IP67-WS20-WH	10	1962990000
IE-CR-IP67-WS20-YE	10	1963030000

IE-CTC-SCST-GOF	1	1032030000
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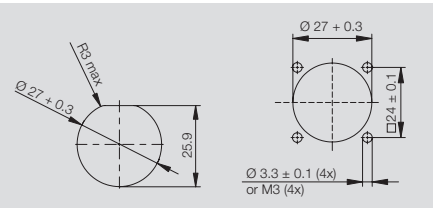
IE-PP-V01P	10	1965690000
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Plug inserts can also be ordered separately. Refer to Inserts.

Plug inserts can also be ordered separately. Refer to Inserts.

Flange bayonet V1 metal -
fibre-optic-LC

Standardised flange



Technical data

Degree of protection
Housing main material
Plugging cycles
Ambient temperature (operational), min. / max.
Connector standard

IP 67
Zinc diecast
500
-40 °C...+70 °C
IEC 61076-3-106 Var. 1, IEC 61754-20

Note

Ordering data - Sets

Singlemode
Multimode

Type	Qty.	Order No.
IE-BS-V01M-LCD-SM-C	10	1963430000
IE-BS-V01M-LCD-MM-C	10	1964440000

Note

Ordering data - Empty housings

Type	Qty.	Order No.
IE-BH-V01M	10	1963540000

Note

Accessories

Dust protection cap



Flange-mounted housing, protective cap

Type	Qty.	Order No.
IE-BP-V01P	10	1965700000

Plug inserts can also be ordered separately. Refer to Inserts.

IP67 plug-in connector

Plug bayonet V1 plastic - RJ45

With kink prevention

Without kink prevention



Technical data

Degree of protection
Housing main material
Sheath diameter, min. / max.
Plugging cycles
Ambient temperature (operational), min. / max.
Wire cross-section, flexible, min. / max.
Wire cross-section, flexible, min. / max.
Wire cross-section, solid, min. / max.
Wire cross-section, solid, min. / max.
Connector standard

Note

IP 67
PA UL 94 V0
5 mm / 10 mm
750
-40 °C...+70 °C
AWG 26 / AWG 22
0.48 mm / 0.76 mm
AWG 24 / AWG 22
0.4 mm / 0.64 mm
IEC 61076-3-106 Var. 1, IEC 60603-7-51

IP 67
PA UL 94 V0
5 mm / 10 mm
750
-40 °C...+70 °C
AWG 26 / AWG 22
0.48 mm / 0.76 mm
AWG 24 / AWG 22
0.4 mm / 0.64 mm
IEC 61076-3-106 Var. 1, IEC 60603-7-51

Ordering data - Sets

RJ45 tool-free, AWG 26-22, TIA-A/-B/-PROFINET
RJ45 Crimp, AWG 27-24

Note

Type	Qty.	Order No.
IE-PS-V01P-RJ45-FH-BP	10	1012570000
IE-PS-V01P-RJ45-TH-BP	10	1012560000

Type	Qty.	Order No.
IE-PS-V01P-RJ45-FH	10	1012490000
IE-PS-V01P-RJ45-TH	10	1012470000

Ordering data - Empty housings

Note

Type	Qty.	Order No.
IE-PH-V01P-BP	10	1012460000

Type	Qty.	Order No.
IE-PH-V01P	10	1012440000

Accessories

Colour coding



blue
orange
green
grey
white
yellow

Dust protection cap



Plug housing protective cap

Type	Qty.	Order No.
IE-CR-IP67-WS20-BU	10	1963020000
IE-CR-IP67-WS20-OG	10	1963010000
IE-CR-IP67-WS20-GN	10	1963040000
IE-CR-IP67-WS20-GY	10	1963000000
IE-CR-IP67-WS20-WH	10	1962990000
IE-CR-IP67-WS20-YE	10	1963030000

IE-PP-V01P	10	1965690000
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Type	Qty.	Order No.
IE-CR-IP67-WS20-BU	10	1963020000
IE-CR-IP67-WS20-OG	10	1963010000
IE-CR-IP67-WS20-GN	10	1963040000
IE-CR-IP67-WS20-GY	10	1963000000
IE-CR-IP67-WS20-WH	10	1962990000
IE-CR-IP67-WS20-YE	10	1963030000

IE-PP-V01P	10	1965690000
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Plug inserts can also be ordered separately. Refer to Inserts.

Plug inserts can also be ordered separately. Refer to Inserts.

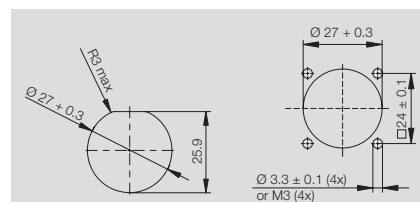
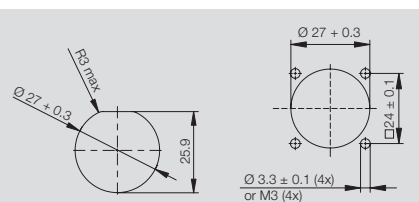
Flange bayonet V1 plastic - RJ45

Module

TIA-A



Coupling



Technical data

Degree of protection
Housing main material
Plugging cycles
Ambient temperature (operational), min. / max.
Connector standard
Wire cross-section, flexible, min. / max.
Wire cross-section, flexible, min. / max.
Wire cross-section, solid, min. / max.
Wire cross-section, solid, min. / max.

Note

IP 67
PA UL 94 V0
750
-40 °C...+70 °C
IEC 61076-3-106 Var. 1, IEC 60603-7-51
AWG 26 / AWG 22
0.48 mm² / 0.76 mm²
AWG 24 / AWG 22
0.4 mm / 0.64 mm

IP 67
PA UL 94 V0
750
-40 °C...+70 °C
IEC 61076-3-106 Var. 1, IEC 60603-7-51

Ordering data - Sets

Type	Qty.	Order No.
IE-BS-V01P-RJ45-FJ-A	10	1012380000

Note

Type	Qty.	Order No.
IE-BS-V01P-RJ45-C	10	1012370000

Ordering data - Empty housings

Type	Qty.	Order No.
IE-BH-V01P	10	1016960000

Note

Type	Qty.	Order No.
IE-BH-V01P	10	1016960000

Accessories

Dust protection cap



Flange-mounted housing, protective cap

Type	Qty.	Order No.
IE-BP-V01P	10	1965700000

Type	Qty.	Order No.
IE-BP-V01P	10	1965700000

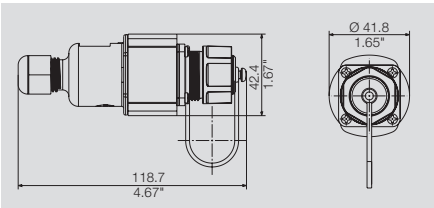
Plug inserts can also be ordered separately. Refer to Inserts.

Plug inserts can also be ordered separately. Refer to Inserts.

IP67 plug-in connector

Cable coupling bayonet V1
plastic - RJ45

Cable coupling



Technical data

Degree of protection
Housing main material
Plugging cycles
Ambient temperature (operational), min. / max.
Connector standard

IP 67
PA UL 94 V0
750
-40 °C...+70 °C
IEC 61076-3-106 Var. 1

Note

Ordering data

Variant 1
Cable coupling

Type	Qty.	Order No.
IE-CC-V01P	10	1061820000

Note

RJ45 modules can be ordered separately

Accessories

Flange insert
RJ45 EIA/TIA 568 A
RJ45 EIA/TIA 568 B
RJ45 PROFINET



Type	Qty.	Order No.
IE-BI-RJ45-FJ-A	10	1962850000
IE-BI-RJ45-FJ-B	10	1963840000
IE-BI-RJ45-FJ-P	10	1963830000

IP67 plug-in connector

Plug PushPull V4 - RJ45

With kink prevention



Without kink prevention



Technical data

Category
Degree of protection
Housing main material
Sheath diameter, min. / max.
Plugging cycles
Ambient temperature (operational), min. / max.
Wire cross-section, flexible, min. / max.
Wire cross-section, flexible, min. / max.
Wire cross-section, solid, min. / max.
Wire cross-section, solid, min. / max.
Connector standard

Note

Cat.6 _A / Class E _A (ISO/IEC 11801 2010)
IP 67
PA UL 94 V0
5 mm / 10 mm
750
-40 °C...+70 °C
AWG 27 / AWG 24
0.46 mm / 0.61 mm
AWG 24 / AWG 22
0.36 mm / 0.51 mm
IEC 61076-3-106 Var. 4, IEC 60603-7-51

Cat.6 _A / Class E _A (ISO/IEC 11801 2010)
IP 67
PA UL 94 V0
5 mm / 10 mm
750
-40 °C...+70 °C
AWG 27 / AWG 24
0.46 mm / 0.61 mm
AWG 24 / AWG 22
0.36 mm / 0.51 mm
IEC 61076-3-106 Var. 4, IEC 60603-7-51

Ordering data - Sets

RJ45 tool-free, AWG 26-22, TIA-A/-B/-PROFINET
RJ45 tool-free, AWG 26-22, TIA-B
RJ45 Crimp, AWG 27-24

Note

Type	Qty.	Order No.
IE-PS-V04P-RJ45-FH-BP	10	1963170000
IE-PS-V04P-RJ45-TH-BP	10	1963190000

Type	Qty.	Order No.
IE-PS-V04P-RJ45-FH	10	1963160000
IE-PS-V04P-RJ45-FH-B	10	1271240000
IE-PS-V04P-RJ45-TH	10	1963180000

Ordering data - Empty housings

Note

Type	Qty.	Order No.
IE-PH-V04P-BP	10	1962530000

Type	Qty.	Order No.
IE-PH-V04P	10	1962520000

Accessories

Colour coding



blue
orange
green
grey
white
yellow

Dust protection cap



Plug housing protective cap

Type	Qty.	Order No.
IE-CR-IP67-WS20-BU	10	1963020000
IE-CR-IP67-WS20-OG	10	1963010000
IE-CR-IP67-WS20-GN	10	1963040000
IE-CR-IP67-WS20-GY	10	1963000000
IE-CR-IP67-WS20-WH	10	1962990000
IE-CR-IP67-WS20-YE	10	1963030000

IE-PP-V04P	10	1963890000
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Type	Qty.	Order No.
IE-CR-IP67-WS20-BU	10	1963020000
IE-CR-IP67-WS20-OG	10	1963010000
IE-CR-IP67-WS20-GN	10	1963040000
IE-CR-IP67-WS20-GY	10	1963000000
IE-CR-IP67-WS20-WH	10	1962990000
IE-CR-IP67-WS20-YE	10	1963030000

IE-PP-V04P	10	1963890000
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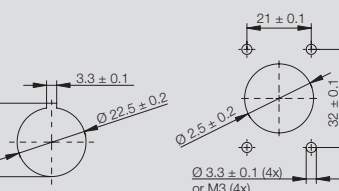
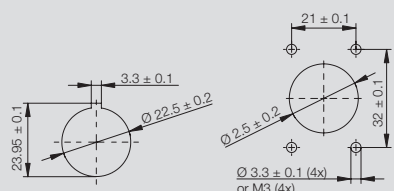
Plug inserts can also be ordered separately. Refer to Inserts.

Plug inserts can also be ordered separately. Refer to Inserts.

Flange PushPull V4 - RJ45

Module

Coupling



Technical data

Degree of protection
Housing main material
Plugging cycles
Ambient temperature (operational), min. / max.
Connector standard
Wire cross-section, flexible, min. / max.
Wire cross-section, flexible, min. / max.
Wire cross-section, solid, min. / max.
Wire cross-section, solid, min. / max.

Note

IP 67
PA UL 94 V0
750
-40 °C...+70 °C
IEC 61076-3-106 Var. 4, IEC 60603-7-51
AWG 26 / AWG 22
0.48 mm / 0.76 mm
AWG 24 / AWG 22
0.4 mm / 0.64 mm

IP 67
PA UL 94 V0
750
-40 °C...+70 °C
IEC 61076-3-106 Var. 4, IEC 60603-7-51

Ordering data - Sets

RJ45 module TIA-B
RJ45 module TIA-A
Coupling

Type	Qty.	Order No.
IE-BS-V04P-RJ45-FJ-B	10	1963730000
IE-BS-V04P-RJ45-FJ-A	10	1963500000

Note

Ordering data - Empty housings

Type	Qty.	Order No.
IE-BH-V04P	10	1963520000

Note

Accessories

Dust protection cap



Flange-mounted housing, protective cap

Type	Qty.	Order No.
IE-BP-V04P	10	1963900000

Type	Qty.	Order No.
IE-BP-V04P	10	1963900000

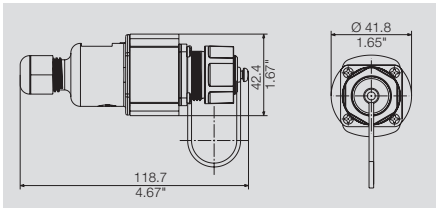
Plug inserts can also be ordered separately. Refer to Inserts.

Plug inserts can also be ordered separately. Refer to Inserts.

IP67 plug-in connector

Cable coupling PushPull V4 - RJ45

Cable coupling



Technical data

Degree of protection
Housing main material
Plugging cycles
Ambient temperature (operational), min. / max.
Connector standard

IP 67
PA UL 94 V0
750
-40 °C...+70 °C
IEC 61076-3-106 Var. 4

Note

Ordering data

Cable coupling

Type	Qty.	Order No.
IE-CC-V04P	10	1045960000

Note

RJ45 modules can be ordered separately

Accessories

Flange insert



RJ45 EIA/TIA 568 A
RJ45 EIA/TIA 568 B
RJ45 PROFINET

Type	Qty.	Order No.
IE-BI-RJ45-FJ-A	10	1962850000
IE-BI-RJ45-FJ-B	10	1963840000
IE-BI-RJ45-FJ-P	10	1963830000

Plug inserts can also be ordered separately. Refer to Inserts.

IP67 plug-in connector

Plug PushPull V4 - fibre-optic-SC

With kink prevention

Without kink prevention



Technical data

Degree of protection
Housing main material
Sheath diameter, min. / max.
Plugging cycles
Ambient temperature (operational), min. / max.
Connector standard
Insertion loss (attenuation)
Return loss (attenuation)

Note

IP 67
PA UL 94 V0
5 mm / 10 mm
500
-40 °C...+70 °C
IEC 61076-3-106 Var. 4, IEC 61754-24
0.5 dB singlemode; 0.4 dB multimode; 1.5 dB POF
40 dB singlemode; 30 dB multimode

IP 67
PA UL 94 V0
5 mm / 10 mm
500
-40 °C...+70 °C
IEC 61076-3-106 Var. 4, IEC 61754-24
0.5 dB singlemode; 0.4 dB multimode; 1.5 dB POF
40 dB singlemode; 30 dB multimode

Ordering data - Sets

Singlemode
Multimode
POF

Note

Type	Qty.	Order No.
IE-PS-V04P-2SC-SM-BP	10	1963410000
IE-PS-V04P-2SC-MM-BP	10	1963370000
IE-PS-V04P-2SC-POF-BP	10	1963390000

Type	Qty.	Order No.
IE-PS-V04P-2SC-SM	10	1963400000
IE-PS-V04P-2SC-MM	10	1963360000
IE-PS-V04P-2SC-POF	10	1963380000

Ordering data - Empty housings

IE-PH-V04P-BP

Note

Type	Qty.	Order No.
IE-PH-V04P-BP	10	1962530000

Type	Qty.	Order No.
IE-PH-V04P	10	1962520000

Accessories

Colour coding
blue
orange
green
grey
white
yellow



Tools



POF tool set
Fibre-optic tool case

Dust protection cap



Plug housing protective cap

Type	Qty.	Order No.
IE-CR-IP67-WS20-BU	10	1963020000
IE-CR-IP67-WS20-OG	10	1963010000
IE-CR-IP67-WS20-GN	10	1963040000
IE-CR-IP67-WS20-GY	10	1963000000
IE-CR-IP67-WS20-WH	10	1962990000
IE-CR-IP67-WS20-YE	10	1963030000

TOOL SET IE-POF	1	1208930000
IE-CTC-SCST-GOF	1	1032030000

IE-PP-V04P	10	1963890000
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Type	Qty.	Order No.
IE-CR-IP67-WS20-BU	10	1963020000
IE-CR-IP67-WS20-OG	10	1963010000
IE-CR-IP67-WS20-GN	10	1963040000
IE-CR-IP67-WS20-GY	10	1963000000
IE-CR-IP67-WS20-WH	10	1962990000
IE-CR-IP67-WS20-YE	10	1963030000

TOOL SET IE-POF	1	1208930000
IE-CTC-SCST-GOF	1	1032030000

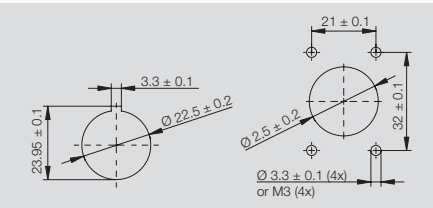
IE-PP-V04P	10	1963890000
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Plug inserts can also be ordered separately. Refer to Inserts.

Plug inserts can also be ordered separately. Refer to Inserts.

Flange PushPull V4 - fibre-optic-SC

Standardised flange



Technical data

Degree of protection
Housing main material
Plugging cycles
Ambient temperature (operational), min. / max.
Connector standard

IP 67
PA UL 94 V0
500
-40 °C...+70 °C
IEC 61076-3-106 Var. 4, IEC 61754-4, IEC 61754-24

Note

Ordering data - Sets

Singlemode
Multimode/POF

Type	Qty.	Order No.
IE-BS-V04P-SCRJ2SC-SM-C	10	1963420000
IE-BS-V04P-SCRJ2SC-MM-C	10	1964470000

Note

Ordering data - Empty housings

Type	Qty.	Order No.
IE-BH-V04P	10	1963520000

Note

Accessories

Dust protection cap



Flange-mounted housing, protective cap

Type	Qty.	Order No.
IE-BP-V04P	10	1963900000

Plug inserts can also be ordered separately. Refer to Inserts.

IP67 plug-in connector

Plug PushPull V4 - fibre-optic-LC

With kink prevention

Without kink prevention



Technical data

Degree of protection
Housing main material
Sheath diameter, min. / max.
Plugging cycles
Ambient temperature (operational), min. / max.
Connector standard
Insertion loss (attenuation)
Return loss (attenuation)

Note

IP 67
PA UL 94 V0
5 mm / 10 mm
500
-40 °C...+70 °C
IEC 61076-3-106 Var. 4, IEC 61754-20
0.5 dB singlemode; 0.4 dB multimode; 1.5 dB POF
40 dB singlemode; 30 dB multimode

IP 67
PA UL 94 V0
5 mm / 10 mm
500
-40 °C...+70 °C
IEC 61076-3-106 Var. 4, IEC 61754-20
0.5 dB singlemode; 0.4 dB multimode; 1.5 dB POF
40 dB singlemode; 30 dB multimode

Ordering data - Sets

Singlemode
Multimode

Type	Qty.	Order No.
IE-PS-V04P-2LC-SM-BP	10	1963350000
IE-PS-V04P-2LC-MM-BP	10	1963330000

Note

Type	Qty.	Order No.
IE-PS-V04P-2LC-SM	10	1963340000
IE-PS-V04P-2LC-MM	10	1963320000

Ordering data - Empty housings

Note

Type	Qty.	Order No.
IE-PH-V04P-BP	10	1962530000

Type	Qty.	Order No.
IE-PH-V04P	10	1962520000

Accessories

Colour coding



blue
orange
green
grey
white
yellow

Tools



Fibre-optic tool case

Dust protection cap



Plug housing protective cap

Type	Qty.	Order No.
IE-CR-IP67-WS20-BU	10	1963020000
IE-CR-IP67-WS20-OG	10	1963010000
IE-CR-IP67-WS20-GN	10	1963040000
IE-CR-IP67-WS20-GY	10	1963000000
IE-CR-IP67-WS20-WH	10	1962990000
IE-CR-IP67-WS20-YE	10	1963030000

Type	Qty.	Order No.
IE-CTC-SCST-GOF	1	1032030000

Type	Qty.	Order No.
IE-PP-V04P	10	1963890000

Type	Qty.	Order No.
IE-CR-IP67-WS20-BU	10	1963020000
IE-CR-IP67-WS20-OG	10	1963010000
IE-CR-IP67-WS20-GN	10	1963040000
IE-CR-IP67-WS20-GY	10	1963000000
IE-CR-IP67-WS20-WH	10	1962990000
IE-CR-IP67-WS20-YE	10	1963030000

Type	Qty.	Order No.
IE-CTC-SCST-GOF	1	1032030000

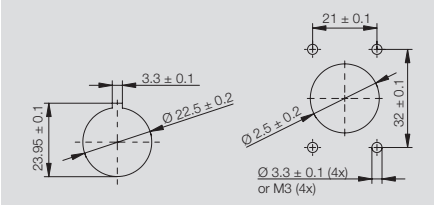
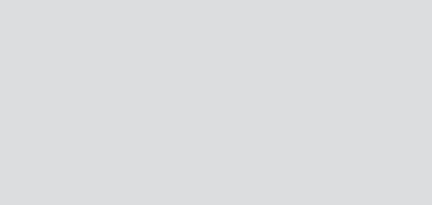
Type	Qty.	Order No.
IE-PP-V04P	10	1963890000

Plug inserts can also be ordered separately. Refer to Inserts.

Plug inserts can also be ordered separately. Refer to Inserts.

Flange PushPull V4 - fibre-optic-LC

Standardised flange



Technical data

Degree of protection
Housing main material
Plugging cycles
Ambient temperature (operational), min. / max.
Connector standard

IP 67
PA UL 94 V0
500
-40 °C...+70 °C
IEC 61076-3-106 Var. 4, IEC 61754-20

Note

Ordering data - Sets

Singlemode
Multimode

Type	Qty.	Order No.
IE-BS-V04P-LCD-SM-C	10	1963450000
IE-BS-V04P-LCD-MM-C	10	1964460000

Note

Ordering data - Empty housings

Type	Qty.	Order No.
IE-BH-V04P	10	1963520000

Note

Accessories

Dust protection cap



Flange-mounted housing, protective cap

Type	Qty.	Order No.
IE-BP-V04P	10	1963900000

Plug inserts can also be ordered separately. Refer to Inserts.

IP67 plug-in connector

Plug RockStar® V5 - RJ45

V5 - RJ45 plug, straight



V5-RJ45 plug, angled



Technical data

Degree of protection
Housing main material
Sheath diameter, min. / max.
Plugging cycles
Ambient temperature (operational), min. / max.
Connector standard

Note

IP 67
diecast aluminium
5 mm / 12 mm
750
-40 °C...+70 °C
IEC 61076-3-106 Var. 5, IEC 60603-7-51

IP 67
diecast aluminium
5 mm / 10 mm
750
-40 °C...+70 °C
IEC 61076-3-106 Var. 5, IEC 60603-7-51

Ordering data - Sets

RJ45 tool-free, AWG 26-22, TIA-A/-B/-PROFINET
RJ45 tool-free, AWG 26-22, TIA-B
RJ45 Crimp, AWG 27-24

Note

Type	Qty.	Order No.
IE-PS-V05M-RJ45-FH	10	1963200000
IE-PS-V05M-RJ45-FH-B	10	1271250000
IE-PS-V05M-RJ45-TH	10	1963110000

Type	Qty.	Order No.
IE-PS-V05M-A-RJ45-FH	10	1077300000

Ordering data - Empty housings

Note

Type	Qty.	Order No.
IE-PH-V05M	10	1962540000

Type	Qty.	Order No.

Accessories

Dust protection cap

Plug housing protective cap

Type	Qty.	Order No.
IE-PP-V05M	10	1968920000

Type	Qty.	Order No.
IE-PP-V05M	10	1968920000

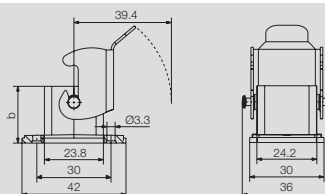
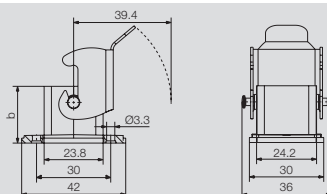
Plug inserts can also be ordered separately. Refer to Inserts.

Plug inserts can also be ordered separately. Refer to Inserts.

Flange RockStar® V5 - RJ45

Module

Coupling



Technical data

Degree of protection
Housing main material
Plugging cycles
Ambient temperature (operational), min. / max.
Connector standard
Wire cross-section, flexible, min. / max.
Wire cross-section, flexible, min. / max.
Wire cross-section, solid, min. / max.
Wire cross-section, solid, min. / max.

Note

IP 67
diecast aluminium
750
-40 °C...+70 °C
IEC 61076-3-106 Var. 5, IEC 60603-7-51
AWG 26 / AWG 22
0.48 mm / 0.76 mm
AWG 24 / AWG 22
0.4 mm / 0.64 mm

IP 67
diecast aluminium
750
-40 °C...+70 °C
IEC 61076-3-106 Var. 5, IEC 60603-7-51

Ordering data - Sets

PROFINET module
TIA-A modul
Coupling

Type	Qty.	Order No.
IE-BS-V05M-RJ45-FJ-P	10	1963700000
IE-BS-V05M-RJ45-FJ-A	10	1963460000

Type	Qty.	Order No.
IE-BS-V05M-RJ45-C	10	1963510000

Note

Ordering data - Empty housings

Type	Qty.	Order No.
IE-BH-V05M	10	1963530000

Type	Qty.	Order No.
IE-BH-V05M	10	1963530000

Note

Accessories

Dust protection cap

Flange-mounted housing, protective cap

Type	Qty.	Order No.
IE-BP-V05M	10	1968930000

Type	Qty.	Order No.
IE-BP-V05M	10	1968930000

Plug inserts can also be ordered separately. Refer to Inserts.

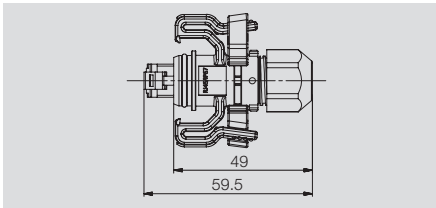
Plug inserts can also be ordered separately. Refer to Inserts.

IP67 plug-in connector

Plug SnapIn V6 - RJ45

- Cat.6
- IP 67

Without kink prevention



Technical data

Category	Cat.6 (ISO/IEC 11801)
Degree of protection	IP 67
Shielding	360° shield contact
Housing main material	PA 66, UL 94: V-0
Colour	light grey
Plugging cycles	750
Type of mounting	Floor-mounted, for exposed connections, Wall-mounted
Wiring	Colour-coded pin assignment to EIA/TIA T568 A.
Ambient temperature (operational), min. / max.	-40 °C...+70 °C
Connector standard	IEC 61076-3-106 Var. 6, IEC 60603-7-5
Note	

Ordering data

Type	Qty.	Order No.
IE-P-IP67	1	8808380000
Note		

Accessories

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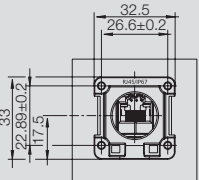
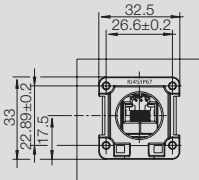
See also the „Accessories“ chapter.

Flange SnapIn V6 - RJ45

- Cat.6
- IP 67

Module

Coupling



Technical data

Category
Degree of protection
Shielding
Housing main material
Colour
Plugging cycles
Type of mounting
Wiring
Ambient temperature (operational), min. / max.
Connector standard

Cat.6 (ISO/IEC 11801)
IP 67
360° shield contact
PA 66, UL 94: V-0
light grey
750
Cabinet, Distribution box
Colour-coded pin assignment to EIA/TIA T568 A.
-40 °C...+70 °C
IEC 61076-3-106 Var. 6, IEC 60603-7-5

Cat.6 (ISO/IEC 11801)
IP 67
360° shield contact
PA 66, UL 94: V-0
light grey
750
Cabinet, Distribution box
-40 °C...+70 °C
IEC 61076-3-106 Var. 6, IEC 60603-7-5

Note

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Ordering data

	Straight
	Angled, downwards
	Angled, upwards

Type	Qty.	Order No.
IE-XM-RJ45/DC-IP67	1	8808440000

Type	Qty.	Order No.
IE-XM-RJ45/RJ45-IP67	1	8808450000
IE-XM-6D-RJ45/RJ45-IP67	1	8829450000
IE-XM-6U-RJ45/RJ45-IP67	1	8829440000

Note

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Accessories

Flange insert
RJ45 module A, straight

Type	Qty.	Order No.
IE-XRJ45/DC	1	8808330000

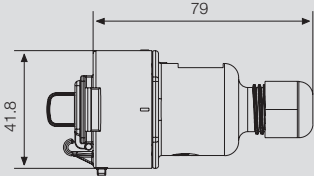
Type	Qty.	Order No.
IE-XRJ45/DC	1	8808330000

IP67 plug-in connector

Cable coupling SnapIn V6 - RJ45

- Cat.6
- IP 67

Cable coupling



Technical data

Category	Cat.6 (ISO/IEC 11801)
Degree of protection	IP 67
Shielding	360° shield contact
Housing main material	PA 66, UL 94: V-0
Colour	light grey
Plugging cycles	750
Type of mounting	Floor-mounted, for exposed connections, Wall-mounted
Wiring	Colour-coded pin assignment to EIA/TIA T568 A.
Ambient temperature (operational), min. / max.	-40 °C...+70 °C
Connector standard	IEC 61076-3-106 Var. 6, IEC 60603-7-5
Note	

Ordering data

	Cable coupling
Note	

Type	Qty.	Order No.
IE-C-IP67	1	8813090000

Accessories

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See also the „Accessories“ chapter.

IP67 plug-in connector

M12 plug

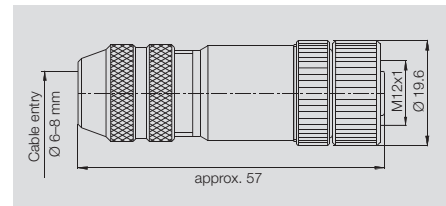
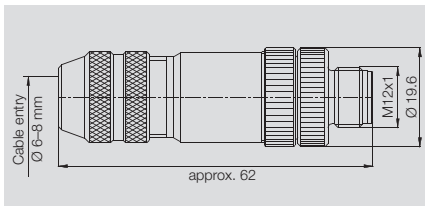
Male pin contact

straight



Female socket contact

straight



Technical data

Degree of protection
Type of connection
Housing main material
Contact tube diameter
Cable diameter, min.
Cross-section for connected wire
Ambient temperature (operational), min. / max.
Connector standard

Note

IP 67
Tension clamp connection
CuZn
M12
6 mm / 8 mm
0.25 - 0.5 mm²
-25 °C...+85 °C
IEC 61076-2-101

IP 67
Tension clamp connection
CuZn
M12
6 mm / 8 mm
0.25 - 0.5 mm²
-25 °C...+85 °C
IEC 61076-2-101

Ordering data

Tension-clamp connection

Straight
Angled

Screw connection

Straight

Note

Type	Qty.	Order No.
SAISM-4/8S-M12 4P D-ZF	1	1892120001
SAISW-4/8S-M12 4P D-ZF	1	1803930001
SAISM-4/8S-M12-4P D-COD	1	1892120000

Type	Qty.	Order No.
SAIBM-4/8S-M12 4P D-ZF	1	1892130001
SAIBM-4/8S-M12-4P D-COD	1	1892130000

Accessories

Adapter / coupling M12

- Cat.5
- IP 67

Adapter M12-RJ45

M12 D-coded on RJ45



Coupling M12-M12

M12 D-coded



Technical data

Category
Degree of protection
Housing main material
Shielding
Ambient temperature (operational), min. / max.
Connector standard

Note

Cat.5 (ISO/IEC 11801)
IP 67
Polyamide, fully shielded metal housing
360° shield contact
-5 °C...+60 °C
IEC 60603-7-5, IEC 61076-2-101

Cat.5 (ISO/IEC 11801)
IP 67
Polyamide, fully shielded metal housing
360° shield contact
-5 °C...+60 °C
IEC 61076-2-101

Ordering data

Adaptor	
	Straight
	Angled
Coupling	

Note

Type	Qty.	Order No.
IE-M12-ADAP S	1	8901620000
IE-M12-ADAP A	1	8901630000

Type	Qty.	Order No.
IE-M12-COUP	1	8901640000

Accessories

IP67 plug-in connector

M12 PCB connection element

- Cat.5
- For installation into the end device

Standard assembly



Additional fastening mechanism



Technical data

Category
Degree of protection
Configuration
Housing main material
Shielding
Ambient temperature (operational), min. / max.
Connector standard
Note

Cat.5 (ISO/IEC 11801)
IP 65 according to DIN EN 60529
Reflow compatible
CuZn, Polyamide, nickel-plated
360° shield contact
-40 °C...+85 °C
IEC 61076-2-101

Cat.5 (ISO/IEC 11801)
IP 65 according to DIN EN 60529
Reflow compatible
CuZn, Polyamide, nickel-plated
360° shield contact
-25 °C...+85 °C
IEC 61076-2-101

Ordering data

Connection element
Note

Type	Qty.	Order No.
IE-M12-PCBCE	60	8902810000

Type	Qty.	Order No.
IE-M12-PCBCE-PANEL	10	8902820000

Accessories

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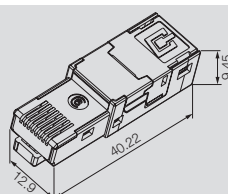
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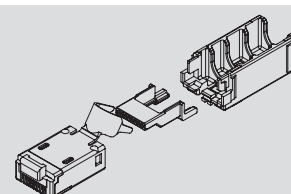
Plug inserts RJ45

- Cat.6_A
- IP 20
- For Variant 1, 4, 5 and 14 housings

tool-free



Crimp



Technical data

Category
Degree of protection
Plugging cycles
Shielding
Housing main material
Contact material / Contact surface
Wire cross-section, flexible, min. / max.
Wire cross-section, flexible, min. / max.
Wire cross-section, solid, min. / max.
Wire cross-section, solid, min. / max.
Insulation cross-section, max.
Humidity
Ambient temperature (operational), min. / max.
Insulation resistance
Dielectric strength, contact / contact
Dielectric strength, contact / shield
Current-carrying capacity at 50 °C
PoE+
Speed
Connector standard

Note

Cat.6 _A / Class E _A (ISO/IEC 11801 2010)
IP 67 with housing
750
360° all-round enclosure
Zinc diecast

AWG 26 / AWG 22
0.48 mm / 0.76 mm
AWG 24 / AWG 24
0.4 mm / 0.64 mm
1.6 mm

-40 °C...+70 °C

500 MΩ

≥ 1000 V DC

≥ 1500 V DC

1 A

10 GBit

IEC 60603-7-51

Cat.6 _A / Class E _A (ISO/IEC 11801 2010)
IP 67 with housing
750
360° all-round enclosure
Brass, PC UL 94 V0

Phosphor bronze / AU ≥ 0.8 μm, Ni 2.54 μm
AWG 27 / AWG 24
0.46 mm / 0.61 mm
AWG 24 / AWG 24
0.4 mm / 0.51 mm
1.05 mm

0...93 % rel. humidity

-40 °C...+70 °C

500 MΩ

≥ 1000 V DC

≥ 1500 V DC

1 A

conforming to IEEE 802.3af

10 GBit

IEC 60603-7-51

Ordering data

tool-free	TIA-A/B/PROFINET
	TIA-A
	TIA-B
	PROFINET

Crimp

Note

Accessories

Tools
Crimping tool
Optional pressing tool

Type	Qty.	Order No.
IE-PI-RJ45-FH	10	1962730000
IE-PI-RJ45-FH-A	10	1132010000
IE-PI-RJ45-FH-B	10	1132020000
IE-PI-RJ45-FH-P	10	1132030000

Type	Qty.	Order No.
PWZ RJ45	1	1118040000

Type	Qty.	Order No.
IE-PI-RJ45-TH	10	1962720000

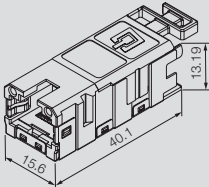
Type	Qty.	Order No.
TT 8 RS MP 8	1	9202800000

IP67 plug-in connector

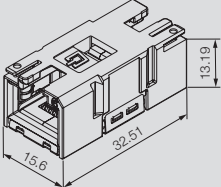
Flange inserts RJ45

- Cat.6_A
- IP 20
- For Variant 1, 4, 5 and 14 housings

Module



Coupling



Technical data

Category
Degree of protection
Plugging cycles
Shielding
Housing main material
Wire cross-section, flexible, min. / max.
Wire cross-section, solid, min. / max.
Insulation cross-section, max.
Connector standard
Ambient temperature (operational), min. / max.
Note

Cat.6 _A / Class E _A (ISO/IEC 11801 2010)
IP 67 with housing
750
360° all-round enclosure
Zinc diecast
AWG 26 / AWG 22
AWG 24 / AWG 24
1.6 mm
IEC 60603-7-51
-40 °C...+70 °C

Cat.6 _A / Class E _A (ISO/IEC 11801 2010)
IP 67 with housing
750
360° all-round enclosure
Zinc diecast
IEC 60603-7-51
-40 °C...+70 °C

Ordering data

No tools needed
TIA-A
TIA-B
PROFINET
Coupling
Note

Type	Qty.	Order No.
IE-BI-RJ45-FJ-A	10	1962850000
IE-BI-RJ45-FJ-B	10	1963840000
IE-BI-RJ45-FJ-P	10	1963830000

Type	Qty.	Order No.
IE-BI-RJ45-C	10	1962840000

Accessories

Tools
Optional pressing tool

Type	Qty.	Order No.
PWZ RJ45	1	1118040000

Type	Qty.	Order No.