















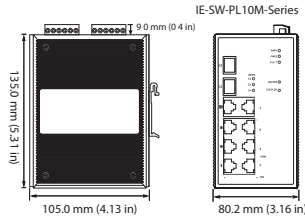






### Managed Gigabit Ethernet Switches

- 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)



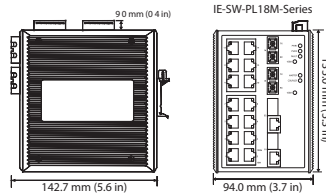
### Technical data

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, SNTP, 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. <ul style="list-style-type: none"> <li>• +13 to +30 V for state "1"</li> <li>• -30 to +3 V for state "0"</li> <li>• Max. input current: 8 mA</li> </ul>
Power Requirements	
Input Voltage	24 VDC (12 to 45 VDC), 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 (mean time 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 Gigabit Ethernet Switches

- 2 Gigabit Ethernet ports plus 16 Fast Ethernet ports for copper and fiber
- 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

<b>Technology Standards</b>	
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	
<b>Protocols</b>	
IGMPv1/v2 • GMRP, GVRP • SNMPv1/v2c/v3 • DHCP Server/Client • BootP • TFTP • SNTp • SMTP • RARP • RMON • HTTP • HTTPS • Telnet • Syslog • DHCP Option 66/67/82 • SSH • SNMP Inform • Modbus/TCP • LLDP • IEEE 1588 PTP • IPv6	
<b>MIB</b>	
MIB-II • Ethernet-Like MIB • P-BRIDGE MIB • Q-BRIDGE MIB • Bridge MIB • RSTP MIB • RMON MIB Group 1, 2, 3, 9	
<b>Flow Control</b>	
IEEE 802.3x flow control, back pressure flow control	
<b>Switch Properties</b>	
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
<b>Interface</b>	
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 VDC
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	
	Multi-mode	Single-mode
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 (60/125 µm multimode cable) 4 km (62.5/125 µm multimode cable)	40 km (9/125 µm singlemode cable)
Saturation	-6 dBm	-3 dBm

<b>Power Requirements</b>	
Input Voltage	24 VDC (12 to 45 VDC), 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

<b>Physical Characteristics</b>	
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

<b>Environmental Limits</b>	
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)

<b>Regulatory Approvals</b>	
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

<b>MTBF (mean time between failures)</b>	
Time	240,000 hrs
Database	Telcordia (Bellcore), GB

<b>Warranty</b>	
Warranty Period	5 years

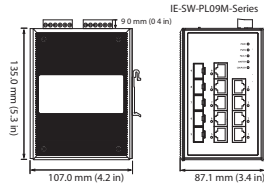
<b>Ordering Information</b>			
Port Variants	Model Type	Operating Temperature	Order No.
16 * RJ45 10/100BaseT(X), 2 * Combo Ports <sup>1</sup>	IE-SW-PL18M-2GC-16TX	0 to +60 °C	<b>1241320000</b>
14 * RJ45 10/100BaseT(X), 2 * SC-Multimode 100FX, 2 * Combo Ports <sup>1</sup>	IE-SW-PL18M-2GC14TX2SC	0 to +60 °C	<b>1241330000</b>
14 * RJ45 10/100BaseT(X), 2 * ST-Multimode 100FX, 2 * Combo Ports <sup>1</sup>	IE-SW-PL18M-2GC14TX2ST	0 to +60 °C	<b>1241340000</b>
14 * RJ45 10/100BaseT(X), 2 * SC-Singlemode 100FX, 2 * Combo Ports <sup>1</sup>	IE-SW-PL18M-2GC14TX2SCS	0 to +60 °C	<b>1241350000</b>

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

<sup>1</sup> (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)



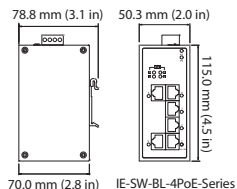
### Technical data

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, 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	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 VDC
Digital Inputs	2 inputs with the same ground, but electrically isolated from the electronics. • +13 to +30V for state "1" • -30 to +3V 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

**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 VDC wide range redundant power inputs
- Intelligent power consumption detection and classification
- Redundant dual VDC power inputs



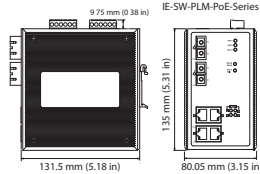
**Technical data**

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 VDC
Input Current	Max 7.5 A @ 24 VDC (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	<b>1241380000</b>
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		<b>1241440000</b>

**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 VDC wide range redundant power inputs
- Advanced PoE management functions, including PD failure check and PoE scheduling



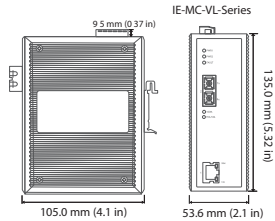
**Technical data**

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 VDC
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 VDC
Input Current	Max. 7.8 A @ 24 VDC (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

**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 VDC
Optical Fiber	
	100BaseFX
	Multi-mode      Single-mode
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 <sup>a</sup> 40 km <sup>c</sup> 4 km <sup>b</sup>
Saturation	-6 dBm      -3 dBm
<sup>a</sup> 50/125 µm, 800 MHz*km fiber optic cable	
<sup>b</sup> 62.5/125 µm, 500 MHz*km fiber optic cable	
<sup>c</sup> 9/125 µm, 3.5 PS/(nm*km) fiber optic cable	
Power Requirements	
Input Voltage	24 VDC (12 to 48 VDC), redundant inputs
Input Current	0.16A (@ 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	<b>1241400000</b>
1 * RJ45, 1 * ST-Multimode	IE-MC-VL-1TX-1ST	0 to +60 °C	<b>1241410000</b>
1 * RJ45, 1 * SC-Singlemode	IE-MC-VL-1TX-1SCS	0 to +60 °C	<b>1241420000</b>
Note: Models with extended operating temperature -40 to +75 °C on request			
Accessories			
	Model Type		Order No.
19" Rack Mounting Kit	RM-KIT		<b>1241440000</b>



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



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 1310 nm, RX 1550 nm	TX 1550 nm, RX 1310 nm
Max. TX	-4 dBm	-1 dBm	-3 dBm	1 dBm	-3 dBm	-2 dBm	-2 dBm	-2 dBm
Min. TX	-9.5 dBm	-9 dBm	-9.5 dBm	-4 dBm	-9 dBm	-8 dBm	-8 dBm	-8 dBm
RX Sensitivity	-18 dBm	-19 dBm	-20 dBm	-24 dBm	-21 dBm	-23 dBm	-23 dBm	-23 dBm
Link Budget	8,5 dB	10 dB	10,5 dB	20 dB	12 dB	15 dB	15 dB	15 dB
Typical Distance	550 m <sup>a)</sup>	2 km <sup>b)</sup>	10 km <sup>c)</sup>	40 km <sup>c)</sup>	10 km <sup>c)</sup>	20 km <sup>c)</sup>	20 km <sup>c)</sup>	20 km <sup>c)</sup>
Saturation	0 dBm	-3 dBm	-3 dBm	-3 dBm	-1 dBm	-1 dBm	-1 dBm	-1 dBm

<sup>a)</sup> 50/125 µm, 400 MHz \* km or 62.5/125 µm, 500 MHz \* km @ 850 nm multi-mode fiber optic cable  
<sup>b)</sup> 62.5/125 µm, 750 MHz \* km @ 1310 nm multi-mode fiber optic cable  
<sup>c)</sup> 9/125 µm single-mode 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-1GLSXL	0 to +60 °C	1241500000
Gigabit Ethernet, Single Mode, LC Connector, 10 km	IE-SFP-1GLXL	0 to +60 °C	1241510000
Gigabit Ethernet, Single Mode, LC Connector, 40 km	IE-SFP-1GLHXL	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



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 <sup>a)</sup>	40 km <sup>b)</sup>	80 km <sup>b)</sup>
Saturation	0 dBm	-3 dBm	-3 dBm

<sup>a)</sup> 50/125 µm or 62.5/125 µm, 800 MHz \* km @ 1300 nm multi-mode fiber optic cable  
<sup>b)</sup> 9/125 µm single-mode 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, Single Mode, LC Connector, 40 km	IE-SFP-1FESLC-T	-40 to +85 °C	1241470000
Fast Ethernet, Single Mode, 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



### Technical data

Basic Operation		
Connector	RS-232 RJ45 port	
Configuration	Use the WEB-Console of managed Switches	
Power Requirements		
Input Voltage	3 to 5 VDC (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		
Port Variants	Model Type	Order No.
External Backup and Restore Module	EBR-Module RS232	1241430000

Quickfinder

Order number	Model type	Ports total	2	5		6	8				9	
		Ports copper	1	5	4	6	8	5	6	6	7	4
		Ports fibre	1		1			3	2	3	1	
		Ports SFP										5
<b>Industrial Ethernet Switches</b>												
1240840000	IE-SW-BL05-5TX			X								
1240850000	IE-SW-BL05T-5TX			X								
1240870000	IE-SW-BL05-4TX-1SCS				X							
1240880000	IE-SW-BL05-4TX-1ST				X							
1240890000	IE-SW-BL05-4TX-1SC				X							
1240900000	IE-SW-BL08-8TX					X						
1240910000	IE-SW-BL08-6TX-2SC							X				
1240920000	IE-SW-BL08T-6TX-2SC							X				
1240930000	IE-SW-BL08-6TX-2ST							X				
1240950000	IE-SW-BL08-7TX-1SCS									X		
1241250000	IE-SW-BL05-5GT			5 GE								
1240980000	IE-SW-VL09T-6TX-3SC								X			
1241000000	IE-SW-VL16-16TX											
1241030000	IE-SW-VL16-14TX-2SC											
1241050000	IE-SW-VL16-14TX-2ST											
1240940000	IE-SW-VL08MT-8TX					X						
1240970000	IE-SW-VL08MT-6TX-3SC						X					
1240990000	IE-SW-VL08MT-6TX-2ST							X				
1241020000	IE-SW-VL08MT-6TX-2SCS							X				
1241270000	IE-SW-VL08-8GT					8 GE						
1241280000	IE-SW-VL08-6GT-2GS							6 GE 2 GEC				
1241040000	IE-SW-PL08M-8TX					X						
1241070000	IE-SW-PL08M-6TX-2SC							X				
1241080000	IE-SW-PL08M-6TX-2ST							X				
1241090000	IE-SW-PL08M-6TX-2SCS							X				
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-2GC14TX2SC											
1241340000	IE-SW-PL18M-2GC14TX2ST											
1241350000	IE-SW-PL18M-2GC14TX2SCS											
1241370000	IE-SW-PL09M-5GC-4GT										5 GEC 4 GE	
<b>Power over Ethernet Switches</b>												
1241380000	IE-SW-BL06-2TX-4PoE					4 PoE+						
1241390000	IE-SW-PL06M-2TX-4PoE					4 PoE+						
<b>Media converter</b>												
1241400000	IE-MC-VL-1TX-1SC		X									
1241410000	IE-MC-VL-1TX-1ST		X									
1241420000	IE-MC-VL-1TX-1SCS		X									
<b>Note:</b>												
FE = Fast Ethernet												
GE = Gigabit Ethernet												
GEC = Gigabit Ethernet Combo Ports												
PoE+ = Power over Ethernet+												

10		16		18		Unmanaged	Managed	Temperature	Further characteristics	Page
10	8	16	14	16	14					
	2		2	2	2					
						x		-10 – 60 °C		5
						x		-40 – 75 °C		5
						x		-10 – 60 °C	Single Mode	5
						x		-10 – 60 °C		5
						x		-10 – 60 °C		5
						x		-10 – 60 °C		5
						x		-40 – 75 °C		5
						x		-10 – 60 °C		5
						x		-10 – 60 °C	Single Mode	5
						x		0 – 60 °C		7
						x		-40 – 75 °C		6
		X				x		0 – 60 °C		6
			X			x		0 – 60 °C		6
			X			x		0 – 60 °C		6
							x	-40 – 75 °C		8
							x	-40 – 75 °C		8
							x	-40 – 75 °C		8
							x	-40 – 75 °C	Single Mode	8
						x		0 – 60 °C		7
						x		0 – 60 °C		7
							x	0 – 60 °C		9
							x	0 – 60 °C		9
							x	0 – 60 °C		9
							x	0 – 60 °C	Single Mode	9
		X					x	0 – 60 °C		9
			X				x	0 – 60 °C		9
			X				x	0 – 60 °C		9
3 GE 7 FE							x	0 – 60 °C		10
	1 GE 2 GEC 7 FE						x	0 – 60 °C		10
				2 GEC 16 FE			x	0 – 60 °C		11
					2 GEC 16 FE		x	0 – 60 °C		11
					2 GEC 16 FE		x	0 – 60 °C		11
					2 GEC 16 FE		x	0 – 60 °C	Single Mode	11
							x	0 – 60 °C		12
						x		0 – 60 °C	PoE+	13
							x	0 – 60 °C	PoE+	14
						x		0 – 60 °C		15
						x		0 – 60 °C		15
						x		0 – 60 °C	Single Mode	15

# Industrial Ethernet passive

## Connectors for copper cable



**RJ45 (IP20)** acc. to IEC 60603-7

For use in office environments, in floor and building distributors, or in the electrical cabinet

The benefits:

- For high-speed transmissions, up to 10-gigabit Ethernet
- Standardized internationally
- Can be used overall
- Sturdy version suitable for industrial applications



**RJ45 (IP67)** acc. to IEC 61076-3-106

For connections between electrical cabinets and for use in the field for gigabit applications

The benefits:

- For high-speed transmissions, up to 10-gigabit Ethernet
- IP67 protection
- Can be assembled in the field



**M12, D-coded** acc. to IEC 61076-2-101

For use near machinery or where a high degree of vibration resistance is required

The benefits:

- Compact design
- IP67 protection
- Can be used with extrusion mould or assembled in the field
- particularly resistant to vibrations

## Connector for fibre-optic cable



**SC duplex** acc. to IEC 61754-4

For use in building distributors, electrical cabinets, together with protective housing it can also be used in the field or for connecting our active components

The benefits:

- For multi-mode, single-mode or POF



**SC-RJ** acc. to IEC 61754-24

For use in building distributors, electrical cabinets, or together with protective housing it can also be used in the field in compliance with PROFINET directive

The benefits:

- For multi-mode, single-mode and POF



**LC-Duplex** acc. to IEC 61754-20

For use in building distributors, electrical cabinets, or together with protective housing it can also be used in the field in compliance with EtherNet/IP directive

The benefits:

- For multi-mode and single-mode
- In protective housing, also in IP67



**ST** acc. to IEC 61754-2

For use in building distributors, electrical cabinets, or for connecting our active components

The benefits:

- For multi-mode, single-mode and POF

## AdvancedLine



The AdvancedLine from Weidmüller offers all combinations of cables that are possible with the extensive range of plug connections.

This means flexibility and robustness through the high quality of the used components. The range comprises standard cables and customer-specific versions. Standard cables can be found in the catalogue; customer-specific versions can be freely configured online using the “Galaxy” configuration software. All AdvancedLine cables are particularly suitable for industrial use.

- High-quality cables with very good technical characteristics
- Suitable for demanding IP20 to IP67 applications
- Suitable for temperatures from -40 to +70 °C
- High-quality shielding

## CabinetLine











The new CabinetLine range of patch cables from Weidmüller is available in a variety of colours for visually differentiating between various networks.

Additional advantage: all CabinetLine cables are fitted with Weidmüller TM marking sleeves for clearly labelling cables and ports. CabinetLine is available in the colours grey, blue, red and violet in combination with LSZH sheathing material and transmission power Cat.6A. Furthermore, CabinetLine is also available in the colour green and Cat.5 with PUR or PVC sheathing material. All variants are fitted with protected clips which facilitate, e.g., pulling through a cable duct.







- For applications in switching cabinets and simple environmental conditions
- Suitable for temperatures from 0 to +60 °C
- Simple shielding

**Metal plug**

Housings				Variant 1 Bayonet		Variant 14 PushPull RJ		Variant 14 PushPull fibre-optic		Variant 5 HDC
										
Inserts				With KS	Without KS	With KS	Without KS	With KS	Without KS	Without KS
					RJ45 AWG 24 crimp		1962720000	1962560000 1963150000	1962550000 1963140000	1011570000 1012070000
	RJ45 AWG 22 tool-free	TIA-A/-B/-P	1962730000	1963130000	1963120000	1012090000	1012170000			1963200000
	LWL SC	MM	1962750000	1963270000	1963260000			Please order separately		
		SM	1962760000	1963310000	1963300000			Please order separately		
		POF	1962770000	1963290000	1963280000			Please order separately		
	LWL LC	MM	1962780000	1963230000	1963220000			Please order separately		
		SM	1962790000	1963250000	1963240000			Please order separately		
	Protective cap			1965690000		1058280000		1058280000		1968920000

KS = anti-kink protection

**Plastic plug**

Housings				Variant 1 Bayonet		Variant 4 PushPull	
							
Inserts				With KS	Without KS	With KS	Without KS
					RJ45 AWG 24 crimp		1962720000
	RJ45 AWG 22 tool-free	TIA-A/-B/-P	1962730000	1012570000	1012490000	1963170000	1963160000
	LWL SC	MM	1962750000	Please order separately		1963370000	1963360000
		SM	1962760000	Please order separately		1963410000	1963400000
		POF	1962770000	Please order separately		1963390000	1963380000
	LWL LC	MM	1962780000	Please order separately		1963330000	1963320000
		SM	1962790000	Please order separately		1963350000	1963340000
	Protective cap			1965690000		1963890000	

KS = anti-kink protection

**Outlet Boxes IP67 plastic**



**Ordering data**

Description	Type	Order No.
Outlet Plastic V04	IE-OP-V04P-1S	1045780000
Cable Coupler V04	IE-CC-V04P	1045960000
Outlet Plastic V01	IE-OP-V01P-1S	1061830000
Cable Coupler V01	IE-CC-V01P	1061820000

**Outlet boxes IP67**



**Ordering data**

Type	Order No.
Bayonet V 01, 1 port, straight	1966300000
Bayonet V 01, 2 ports, left	1966320000
Bayonet V 01, 2 ports, right	1966310000
Bayonet V 01, 2 ports, straight	1966330000












**Ordering data**

Type	Order No.
Push Pull V 04, 1 port, straight	1966220000
Push Pull V 04, 2 ports, left	1966240000
Push Pull V 04, 2 ports, right	1966230000
Push Pull V 04, 2 ports, straight	1966250000








**Ordering data**

Type	Order No.
RockStar® V 05, 1 port, straight	1966260000
RockStar® V 05, 2 ports, left	1966280000
RockStar® V 05, 2 ports, right	1966270000
RockStar® V 05, 2 ports, straight	1966290000

**Metal flange**

			Housings	Variant 1 Bayonet	Variant 14 PushPull RJ		Variant 14 PushPull fibre-optic		Variant 5 HDC
									
				1963540000	1011540000	1047950000	Standardized flange	Central flange	
	RJ45 coupling		1962840000	1963470000	1012310000	1058250000			1963530000 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	Multi Mode	1964430000	1964450000			1058120000	1062590000	
		Single Mode	1962870000	1963440000			1058140000	1062600000	
	LC Duplex coupling	Multi Mode	1964420000	1964440000			1058130000	1062610000	
		Single Mode	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	1968930000

**Plastic flange**

			Housings	Variant 1 Bayonet	Variant 4 PushPull
					
				1016960000	1963520000
	RJ45 coupling		1962840000	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	Multi Mode	1964430000	Please order separately	1964470000
		Single Mode	1962870000	Please order separately	1963420000
	LC Duplex coupling	Multi Mode	1964420000	Please order separately	1964460000
		Single Mode	1962880000	Please order separately	1963450000
	USB coupling		1019570000	Please order separately	Please order separately
	Protective cap			1965700000	1963900000

**M12 adaptors and coupler**



**Ordering data**

Description	Type	Order No.
Adaptor, 90°	IE-M12-Adap a	8901630000
Adaptor, straight	IE-M12-Adap s	8901620000
Coupler	IE-M12-Coup	8901640000

**Front panel interface FrontCom®**



**Ordering data**

Description	Type	Order No.
Lockable housing with key	FRONTCOM GH KEY	1879200000
Lockable housing with knob	FRONTCOM GH KNOB	1879210000



**Ordering data**

Description	Type	Order No.
Insert with data interfaces	FRONTCOM AR DATA	1879220000
Insert with power socket	FRONTCOM AR PLUG	1879230000



**Ordering data**

Description	Type	Order No.
RJ45 Coupling	IE-FCM-RJ45-C	1018790000
TIA-A Module	IE-FCM-RJ45-FJ-A	1018810000
TIA-B Module	IE-FCM-RJ45-FJ-B	1018820000
Industrial Ethernet Module	IE-FCM-RJ45-FJ-P	1018830000
USB Coupling	IE-FCM-USB-A	1018840000
USB Coupling	IE-FCM-USB-AB	1222550000
Accessories: SwitchMark	SM27/18	

**RJ45 plug field installation**



**Ordering data**

Description	Type	Order No.
Plug A/B/Ind. Ethernet	IE-PS-RJ45-FH-BK	<b>1963600000</b>
Plug TIA - A	IE-PS-RJ45-BK-A	<b>1132040000</b>
Plug TIA - B	IE-PS-RKJ45-BK-B	<b>1132050000</b>
Plug TIA - P	IE-PS-RKJ45-BK-P	<b>1132060000</b>

**RJ45 crimp plug**



**Ordering data**

Description	Type	Order No.
Plug with cable bushing in black	IE-PS-RJ45-TH-BK	<b>1963590000</b>
Plug without cable bushing	IE-PM-RJ45-TH	<b>1963580000</b>

**SC duplex connectors**



**Ordering data**

Description	Type	Order No.
Plug SC duplex, singlemode	IE-PS-SCD-SM	<b>1964410000</b>
Plug SC duplex, multimode	IE-PS-SCD-MM	<b>1964480000</b>
Plug SC duplex, POF	IE-PS-SCD-MM	<b>1962930000</b>

**SCRJ connectorsv**



**Ordering data**

Description	Type	Order No.
Plug SCRJ, singlemode	IE-PS-SCRJ1-SM	<b>1206740000</b>
Plug SCRJ, multimode	IE-PS-SCRJ1-MM	<b>1206730000</b>
Plug SCRJ, POF	IE-PS-SCRJ1-POF	<b>1206720000</b>

**LC duplex connectors**



**Ordering data**

Description	Type	Order No.
Plug LC duplex, singlemode	IE-PS-LCD-SM	<b>1962980000</b>
Plug LC duplex, multimode	IE-PS-LCD-MM	<b>1962970000</b>

**Terminal rail outlets**



**Ordering data**

Description	Type	Order No.
RJ45 module EIA/TIA 568 A	IE-XM-RJ45/IDC	<b>8808360000</b>
RJ45 module EIA/TIA 568 B	IE-XM-RJ45/IDC-B	<b>8891980000</b>
RJ45-RJ45 coupler	IE-XM-RJ45/RJ45	<b>8879050000</b>
ST-ST coupler	IE-XM-ST/ST	<b>8808340000</b>

**Ordering data**

Description	Type	Order No.
RJ45-RJ45 coupler	IE-TO-RJ45-C	<b>8946920000</b>
RJ45 module EIA/TIA 568 A	IE-TO-RJ45-FJ-A	<b>8946930000</b>
RJ45 module EIA/TIA 568 B	IE-TO-RJ45-FJ-B	<b>8946940000</b>
RJ45 module Ind. Ethernet	IE-TO-RJ45-FJ-P	<b>8946950000</b>
USB-A coupler	IE-TO-USB	<b>8946960000</b>

**Ordering data**

Description	Type	Order No.
Adaptor LC Duplex MM	IE-TO-LCD-MM	<b>8947010000</b>
Adaptor LC Duplex SM	IE-TO-LCD-SM	<b>8947020000</b>
Adaptor SC Duplex MM	IE-TO-SCD-MM	<b>8946970000</b>
Adaptor SC Duplex SM	IE-TO-SCD-SM	<b>8946980000</b>
Adaptor SC-RJ MM	IE-TO-SCRJ-MM	<b>8946990000</b>
Adaptor SC-RJ SM	IE-TO-SCRJ-SM	<b>8947000000</b>

### Cable tester



#### Ordering data

Description	Type	Order No.
Tester	LAN USB TESTER	9205400000

### Cable markers



#### Ordering data

Description	Type	Order No.
SlimFix, 4.7 – 5.8 mm	SF 5/21 NEUTRAL WS V0	1696130001
SlimFix, 5.8 – 7.0 mm	SF 6/21 NEUTRAL WS V0	1740870001
TM-I for M12, 18 mm	TM-I 18 NEUTRAL WS	1718431044

### Dismantling tool



#### Ordering data

Description	Type	Order No.
for Ethernet cables	IE-CST	9204350000
for UTP / STP data cables	AM12	9030060000

### Hole punch



#### Ordering data

Description	Type	Order No.
Hand Tool	IE-KO-HAT	1966810000
Insert for Variant 1	IE-KOK-V1	1966780000
Insert for Variant 4	IE-KOK-V4	1966790000
Insert for Variant 5	IE-KOK-V5	9204790000

### Crimping pliers RJ45



#### Ordering data

Description	Type	Order No.
TT 8 RS MP 8		9202800000

### Crimping pliers FO



#### Ordering data

Description	Type	Order No.
SC GOF	IE-CT-SC-GOF	9205320000
SC GOF Profinet	IE-CT-SC-GOF-P	9205350000
SC POF	E-CT-SC-POF	9205340000
LC GOF	IE-CT-LC-GOF	9205330000

**Copper cables**

**Connecting cable**



**Ordering data**

Type	100 m	per meter
Cat.5; 4x2xAWG26/7; PUR	8813200000	8938880000
Cat.5; 4x2xAWG26/7; PVC	8813190000	8955490000
Cat.7; 4x2xAWG26/7; PUR	8813180000	8954300000
Cat.7; 4x2xAWG26/7; PVC	8813170000	8955480000
Cat.5; 4xAWG22/7+6x0,5mm <sup>2</sup> ; PVC*		1172250000
Cat.5; 4xAWG22/7; PVC*	8898990000	8955560000

\* PROFINET

**Installation cable**



**Ordering data**

Type	100 m	per meter
Cat.5; 4x2xAWG24/1; PUR	8813160000	8944310000
Cat.5; 4x2xAWG24/1; PVC	8813150000	8953160000
Cat.7; 4x2xAWG23/1; PUR	8813140000	8955350000
Cat.7; 4x2xAWG23/1; PVC	8813130000	8955360000
Cat.5; 4xAWG22/1; PVC*	8899000000	8955950000

\* PROFINET

**Trailing cable**



**Ordering data**

Type	100 m	per meter
Cat.5; 4x2xAWG26/7; PUR	8813210000	8936390000
Cat.5; 4xAWG22/7; PUR*	8899010000	8947670000
Cat.5; 4xAWG22/19; PUR; Torsion*		1103010000
Cat.5; 4x2xAWG26/7; PUR; blue	8900670000	

\* PROFINET

**Fibre optic cables**

**FO connecting cable, zipcord, POF**



**Ordering data**

Type	Order No.
IE-FPOZ2EE-MW	1242820000

**FO connecting cable, breakout, MM**



**Ordering data**

Type	Order No.
IE-FM5B2VE-MW	8946000000
IE-FM6B2VE-MW	8956060000

**FO trailing cable, breakout, MM, POF**



**Ordering data**

Type	Order No.
IE-FM5D2UE-MW	8956070000
IE-FM6D2UE-MW	8956050000
IE-FPOD2UE-MW	1172280000

**Copper cables**

**System cable Cat.6 RJ45 IP20**



**Ordering data**

Description	Type	Order No.
1 m	IE-C6ES8UG0010A40A40-E	8829500000
2 m	IE-C6ES8UG0020A40A40-E	8815050000
5 m	IE-C6ES8UG0050A40A40-E	8815080000
10 m	IE-C6ES8UG0100A40A40-E	8815110000
15 m	IE-C6ES8UG0150A40A40-E	8829530000

**Trailing cable Cat.5 RJ45 IP67 V 06**



**Ordering data**

Description	Type	Order No.
2 m	IE-C5ED8UG0020A46A46-X	8829720000
5 m	IE-C5ED8UG0050A46A46-X	8829730000
10 m	IE-C5ED8UG0100A46A46-X	8829740000
15 m	IE-C5ED8UG0150A46A46-X	8829750000
20 m	IE-C5ED8UG0200A46A46-X	8829760000

**Trailing cable Cat.5 M12 IP67**



**Ordering data**

Description	Type	Order No.
1.5 m	IE-C5AS4UG0015MCSMCS-X	8877610015
3 m	IE-C5AS4UG0030MCSMCS-X	8877610030
5 m	IE-C5AS4UG0050MCSMCS-X	8877610050
10 m	IE-C5AS4UG0100MCSMCS-X	8877610100

**Fibre optic cables**

**FO patch cable SC duplex, zipcord, MM**



**Ordering data**

Description	Type	Order No.
Core 50 µm, 2 m	IE-FM5Z2VO0002MSD0SD0X	8813310000
Core 50 µm, 5 m	IE-FM5Z2VO0005MSD0SD0X	8876350050
Core 62.5 µm, 2 m	IE-FM6Z2VO0002MSD0SD0X	8813340000
Core 62.5 µm, 5 m	IE-FM6Z2VO0005MSD0SD0X	8876360050

**FO system cable SC duplex, breakout, MM**



**Ordering data**

Description	Type	Order No.
Core 50 µm, 10 m	IE-FM5B2VO0010MSD0SD0X	8813450000
Core 50 µm, 100 m	IE-FM5B2VO0100MSD0SD0X	8876391000
Core 62.5 µm, 10 m	IE-FM6B2VO0010MSD0SD0X	8813460000
Core 62.5 µm, 100 m	IE-FM6B2VO0100MSD0SD0X	8876401000

**FO trailing cable SC duplex, breakout, MM**



**Ordering data**

Description	Type	Order No.
Core 50 µm, 3 m	IE-FM5D2UO0003MSD0SD0X	8876430030
Core 50 µm, 10 m	IE-FM5D2UO0010MSD0SD0X	8876430100
Core 62.5 µm, 3 m	IE-FM6D2UO0003MSD0SD0X	8876440030
Core 62.5 µm, 10 m	IE-FM6D2UO0010MSD0SD0X	8876440100

## Patch cables – CabinetLine

### CabinetLine Cat.6A/LSZH

Patch cable Cat.6 LSZH, grey



### Ordering data

Cable length	Type	Order No.
0.5 m	IE-C6FP8LD0005M40M40-D	1165940005
1 m	IE-C6FP8LD0010M40M40-D	1165940010
1.5 m	IE-C6FP8LD0015M40M40-D	1165940015
2 m	IE-C6FP8LD0020M40M40-D	1165940020
3 m	IE-C6FP8LD0030M40M40-D	1165940030
5 m	IE-C6FP8LD0050M40M40-D	1165940050
7.5 m	IE-C6FP8LD0075M40M40-D	1165940075
10 m	IE-C6FP8LD0100M40M40-D	1165940100
15 m	IE-C6FP8LD0150M40M40-D	1165940150
20 m	IE-C6FP8LD0200M40M40-D	1165940200

Note

### CabinetLine Cat.6A/LSZH

Patch cable Cat.6 LSZH, blue



### Ordering data

Cable length	Type	Order No.
0.5 m	IE-C6FP8LB0005M40M40-B	1165900005
1 m	IE-C6FP8LB0010M40M40-B	1165900010
1.5 m	IE-C6FP8LB0015M40M40-B	1165900015
2 m	IE-C6FP8LB0020M40M40-B	1165900020
3 m	IE-C6FP8LB0030M40M40-B	1165900030
5 m	IE-C6FP8LB0050M40M40-B	1165900050
10 m	IE-C6FP8LB0100M40M40-B	1165900100
15 m	IE-C6FP8LB0150M40M40-B	1165900150
20 m	IE-C6FP8LB0200M40M40-B	1165900200

Note

### CabinetLine Cat.6A/LSZH

Patch cable Cat.6 LSZH, red



### Ordering data

Cable length	Type	Order No.
0.5 m	IE-C6FP8LR0005M40M40-R	1166030005
1 m	IE-C6FP8LR0010M40M40-R	1166030010
1.5 m	IE-C6FP8LR0015M40M40-R	1166030015
2 m	IE-C6FP8LR0020M40M40-R	1166030020
3 m	IE-C6FP8LR0030M40M40-R	1166030030
5 m	IE-C6FP8LR0050M40M40-R	1166030050
10 m	IE-C6FP8LR0100M40M40-R	1166030100
15 m	IE-C6FP8LR0150M40M40-R	1166030150
20 m	IE-C6FP8LR0200M40M40-R	1166030200

Note

Accessories, can be used with all cables:

Inlay tag, white: TM-I 18 neutral WS: order no. 1718431044  
(also available in the colours yellow, blue, red and green)

**CabinetLine Cat.6A/LSZH**

Patch cable Cat.6 LSZH, magenta

**Ordering data**

Cable length	Type	Order No.
0.2 m	IE-C6FP8LM0002M40M40-M	1201270002
0.35 m	IE-C6FP8LM0035CM40M40-M	1201380000
0.5 m	IE-C6FP8LM0005M40M40-M	1201270005
1 m	IE-C6FP8LM0010M40M40-M	1201270010
1.5 m	IE-C6FP8LM0015M40M40-M	1201270015
2 m	IE-C6FP8LM0020M40M40-M	1201270020
3 m	IE-C6FP8LM0030M40M40-M	1201270030
5 m	IE-C6FP8LM0050M40M40-M	1201270050
10 m	IE-C6FP8LM0100M40M40-M	1201270100
15 m	IE-C6FP8LM0150M40M40-M	1201270150
20 m	IE-C6FP8LM0200M40M40-M	1201270200

Note

**CabinetLine Cat.5/PVC**

Patch cable Cat.5 PVC, green

**Ordering data**

Cable length	Type	Order No.
0.5 m	IE-C5ES8VG0005M40M40-G	1166020005
1 m	IE-C5ES8VG0010M40M40-G	1166020010
1.5 m	IE-C5ES8VG0015M40M40-G	1166020015
2 m	IE-C5ES8VG0020M40M40-G	1166020020
3 m	IE-C5ES8VG0030M40M40-G	1166020030
5 m	IE-C5ES8VG0050M40M40-G	1166020050
10 m	IE-C5ES8VG0100M40M40-G	1166020100
15 m	IE-C5ES8VG0150M40M40-G	1166020150
20 m	IE-C5ES8VG0200M40M40-G	1166020200

Note

**CabinetLine Cat.5/PUR**

Patch cable Cat.5 PUR, green

**Ordering data**

Cable length	Type	Order No.
0.5 m	IE-C5ES8UG0005M40M40-G	1166000005
1 m	IE-C5ES8UG0010M40M40-G	1166000010
1.5 m	IE-C5ES8UG0015M40M40-G	1166000015
2 m	IE-C5ES8UG0020M40M40-G	1166000020
3 m	IE-C5ES8UG0030M40M40-G	1166000030
5 m	IE-C5ES8UG0050M40M40-G	1166000050
10 m	IE-C5ES8UG0100M40M40-G	1166000100
15 m	IE-C5ES8UG0150M40M40-G	1166000150
20 m	IE-C5ES8UG0200M40M40-G	1166000200

Note

Accessories, can be used with all cables:

Inlay tag, white: TM-I 18 neutral WS: order no. 1718431044  
(also available in the colours yellow, blue, red and green)

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