




Product information M-SFP-BIDI Type A LH/LC EEC - M-SFP-BIDI-Bundle LH/LC EEC

Industrial Ethernet: System Accessories: Fiberoptic Transceiver: SFP-BIDI Bidirectional Gigabit Ethernet Transceiver: M-SFP-BIDI Type A LH/LC EEC

<http://www.e-catalog.beldensolutions.com/link/57078-24455-24544-24535-65079-65180/en/conf/ui/state>

Name	M-SFP-BIDI Type A LH/LC EEC
	
	SFP Fiberoptic bi-directional Gigabit Ethernet Transceiver LH, single strand, type A
Delivery informations	
Availability	available
Product description	
Description	SFP Fiberoptic bi-directional Gigabit Ethernet Transceiver LH, single strand, type A
Port type and quantity	1 x 1000BASE-LX with LC connector, extended temperature range
Type	M-SFP-BIDI-Bundle LH/LC EEC
Order No.	943 975-001
Network size - length of cable	
Multimode fiber (MM) 50/125 µm	n/a
Multimode fiber (MM) 62.5/125 µm	n/a
Single mode fiber (SM) 9/125 µm	23 km - 80 km, 5 - 24 dB Link Budget (1490nm type A, 1590 type B) A = 0.25 dB/km, 2 dB Reserve, D = 3.5 ps/(nm x km)
Single mode fiber (LH) 9/125 µm (long haul transceiver)	n/a
Power requirements	
Operating voltage	power supply via the switch
Power consumption	1 W
Service	
Diagnostics	optical input and output power, transceiver temperature
Ambient conditions	
Operating temperature	-40 °C to +85 °C
Storage/transport temperature	-40°C to +85°C
Relative humidity (non-condensing)	10% to 95%
MTBF	n/a
Mechanical construction	
Dimensions (W x H x D)	20 mm x 18 mm x 50 mm
Mounting	SFP slot
Weight	40 g
Protection class	IP 20
Mechanical stability	
IEC 60068-2-27 shock	15 g, 11 ms duration, 18 shocks
IEC 60068-2-6 vibration	1 mm, 2 Hz - 13.2 Hz, 90 min.; 0.7g, 13.2 Hz - 100 Hz, 90 min.; 3.5 mm, 3 Hz - 9 Hz, 10 cycles, 1 octave/min.; 1g, 9 Hz - 150 Hz, 10 cycles, 1 octave/min
EMC interference immunity	
EN 61000-4-2 electrostatic discharge (ESD)	6 kV contact discharge, 8 kV air discharge
EN 61000-4-3 electromagnetic field	10 V/m (80 - 1000 MHz)
EN 61000-4-4 fast transients (burst)	2 kV power line, 1 kV data line
EN 61000-4-5 surge voltage	power line: 2 kV (line/earth), 1 kV (line/line), 1kV data line
EN 61000-4-6 conducted immunity	3 V (10 kHz - 150 kHz), 10 V (150 kHz - 80 MHz)
EMC emitted immunity	
FCC CFR47 Part 15	FCC CFR47 Part 15 Class A
EN 55022	EN 55022 Class A
Approvals	
Shipbuilding	Germanischer Lloyd

Industrial Ethernet: System Accessories: Fiberoptic Transceiver: SFP-BIDI Bidirectional Gigabit Ethernet Transceiver: M-SFP-BIDI Type A LH/LC EEC

<http://www.e-catalog.beldensolutions.com/link/57078-24455-24544-24535-65079-65180/en/conf/uistate>

Scope of delivery and accessories

Scope of delivery	SFP module
Accessories to order separately	n/a

For more information please contact:

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Product information M-SFP-BIDI Type A LX/LC EEC

Industrial Ethernet: System Accessories: Fiberoptic Transceiver: SFP-BIDI Bidirectional Gigabit Ethernet Transceiver: M-SFP-BIDI Type A LX/LC EEC

<http://www.e-catalog.beldensolutions.com/link/57078-24455-24544-24535-65079-65129/en/conf/ui/state>

Name	M-SFP-BIDI Type A LX/LC EEC
	
	SFP Fiberoptic bi-directional Gigabit Ethernet Transceiver SM, single strand, type A
Delivery informations	
Availability	available
Product description	
Description	SFP Fiberoptic bi-directional Gigabit Ethernet Transceiver SM, single strand, type A
Port type and quantity	1 x 1000BASE-LX with LC connector, extended temperature range
Type	M-SFP-BIDI Type A LX/LC EEC
Order No.	943 974-001
Network size - length of cable	
Multimode fiber (MM) 50/125 µm	n/a
Multimode fiber (MM) 62.5/125 µm	n/a
Single mode fiber (SM) 9/125 µm	0 m - 20 km, 0 - 11 dB Link Budget (1310 nm type A) A = 0.4 dB/km, 3 dB Reserve, D = 3.5 ps/(nm x km)
Single mode fiber (LH) 9/125 µm (long haul transceiver)	n/a
Power requirements	
Operating voltage	power supply via the switch
Power consumption	1 W
Service	
Diagnostics	optical input and output power, transceiver temperature
Ambient conditions	
Operating temperature	-40 °C to +85 °C
Storage/transport temperature	-40°C to +85°C
Relative humidity (non-condensing)	10% to 95%
MTBF	n/a
Mechanical construction	
Dimensions (W x H x D)	20 mm x 18 mm x 50 mm
Mounting	SFP slot
Weight	40 g
Protection class	IP 20
Mechanical stability	
IEC 60068-2-27 shock	15 g, 11 ms duration, 18 shocks
IEC 60068-2-6 vibration	1 mm, 2 Hz - 13.2 Hz, 90 min.; 0.7g, 13.2 Hz - 100 Hz, 90 min.; 3.5 mm, 3 Hz - 9 Hz, 10 cycles, 1 octave/min.; 1g, 9 Hz - 150 Hz, 10 cycles, 1 octave/min
EMC interference immunity	
EN 61000-4-2 electrostatic discharge (ESD)	6 kV contact discharge, 8 kV air discharge
EN 61000-4-3 electromagnetic field	10 V/m (80 - 1000 MHz)
EN 61000-4-4 fast transients (burst)	2 kV power line, 1 kV data line
EN 61000-4-5 surge voltage	power line: 2 kV (line/earth), 1 kV (line/line), 1kV data line
EN 61000-4-6 conducted immunity	3 V (10 kHz - 150 kHz), 10 V (150 kHz - 80 MHz)
EMC emitted immunity	
FCC CFR47 Part 15	FCC CFR47 Part 15 Class A
EN 55022	EN 55022 Class A
Approvals	
Hazardous locations	ISA 12.12.01 Class 1 Div. 2
Shipbuilding	Germanischer Lloyd

Industrial Ethernet: System Accessories: Fiberoptic Transceiver: SFP-BIDI Bidirectional Gigabit Ethernet Transceiver: M-SFP-BIDI Type A LX/LC EEC

<http://www.e-catalog.beldensolutions.com/link/57078-24455-24544-24535-65079-65129/en/conf/uistate>

Scope of delivery and accessories

Scope of delivery	SFP module
Accessories to order separately	n/a

For more information please contact:

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Product information M-SFP-BIDI Type B LH/LC EEC

Industrial Ethernet: System Accessories: Fiberoptic Transceiver: SFP-BIDI Bidirectional Gigabit Ethernet Transceiver: M-SFP-BIDI Type B LH/LC EEC

<http://www.e-catalog.beldensolutions.com/link/57078-24455-24544-24535-65079-65181/en/conf/ui/state>

Name	M-SFP-BIDI Type B LH/LC EEC
	
	SFP Fiberoptic bi-directional Gigabit Ethernet Transceiver LH, single strand, type B
Delivery informations	
Availability	available
Product description	
Description	SFP Fiberoptic bi-directional Gigabit Ethernet Transceiver LH, single strand, type B
Port type and quantity	1 x 1000BASE-LX with LC connector, extended temperature range
Type	M-SFP-BIDI Type B LH/LC EEC
Order No.	943 975-002
Network size - length of cable	
Multimode fiber (MM) 50/125 µm	n/a
Multimode fiber (MM) 62.5/125 µm	n/a
Single mode fiber (SM) 9/125 µm	n/a
Single mode fiber (LH) 9/125 µm (long haul transceiver)	23 km - 80 km, 5 - 24 dB Link Budget (1490nm type A, 1590 type B) A = 0.25 dB/km, 2 dB Reserve, D = 3.5 ps/(nm x km)
Power requirements	
Operating voltage	power supply via the switch
Power consumption	1 W
Service	
Diagnostics	optical input and output power, transceiver temperature
Ambient conditions	
Operating temperature	-40 °C to +85 °C
Storage/transport temperature	-40°C to +85°C
Relative humidity (non-condensing)	10% to 95%
MTBF	n/a
Mechanical construction	
Dimensions (W x H x D)	20 mm x 18 mm x 50 mm
Mounting	SFP slot
Weight	40 g
Protection class	IP 20
Mechanical stability	
IEC 60068-2-27 shock	15 g, 11 ms duration, 18 shocks
IEC 60068-2-6 vibration	1 mm, 2 Hz - 13.2 Hz, 90 min.; 0.7g, 13.2 Hz - 100 Hz, 90 min.; 3.5 mm, 3 Hz - 9 Hz, 10 cycles, 1 octave/min.; 1g, 9 Hz - 150 Hz, 10 cycles, 1 octave/min
EMC interference immunity	
EN 61000-4-2 electrostatic discharge (ESD)	6 kV contact discharge, 8 kV air discharge
EN 61000-4-3 electromagnetic field	10 V/m (80 - 1000 MHz)
EN 61000-4-4 fast transients (burst)	2 kV power line, 1 kV data line
EN 61000-4-5 surge voltage	power line: 2 kV (line/earth), 1 kV (line/line), 1kV data line
EN 61000-4-6 conducted immunity	3 V (10 kHz - 150 kHz), 10 V (150 kHz - 80 MHz)
EMC emitted immunity	
FCC CFR47 Part 15	FCC CFR47 Part 15 Class A
EN 55022	EN 55022 Class A
Approvals	
Shipbuilding	Germanischer Lloyd
Scope of delivery and accessories	
Scope of delivery	SFP module

Industrial Ethernet: System Accessories: Fiberoptic Transceiver: SFP-BIDI Bidirectional Gigabit Ethernet Transceiver: M-SFP-BIDI Type B LH/LC EEC

<http://www.e-catalog.beldensolutions.com/link/57078-24455-24544-24535-65079-65181/en/conf/uistate>

Accessories to order separately

n/a

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Product information M-SFP-BIDI Type B LX/LC EEC

Industrial Ethernet: System Accessories: Fiberoptic Transceiver: SFP-BIDI Bidirectional Gigabit Ethernet Transceiver: M-SFP-BIDI Type B LX/LC EEC

<http://www.e-catalog.beldensolutions.com/link/57078-24455-24544-24535-65079-65179/en/conf/ui/state>

Name	M-SFP-BIDI Type B LX/LC EEC
	
	SFP Fiberoptic bi-directional Gigabit Ethernet Transceiver SM, single strand, type B
Delivery informations	
Availability	available
Product description	
Description	SFP Fiberoptic bi-directional Gigabit Ethernet Transceiver SM, single strand, type B
Port type and quantity	1 x 1000BASE-LX with LC connector, extended temperature range
Type	M-SFP-BIDI Type B LX/LC EEC
Order No.	943 974-002
Network size - length of cable	
Multimode fiber (MM) 50/125 µm	n/a
Multimode fiber (MM) 62.5/125 µm	n/a
Single mode fiber (SM) 9/125 µm	0 m - 20 km, 0 - 11 dB Link Budget (1310nm type A, 1550 nm type B) A = 0.4 dB/km, 3 dB Reserve, D = 3.5 ps/(nm x km)
Single mode fiber (LH) 9/125 µm (long haul transceiver)	n/a
Power requirements	
Operating voltage	power supply via the switch
Power consumption	1 W
Service	
Diagnostics	optical input and output power, transceiver temperature
Ambient conditions	
Operating temperature	-40 °C to +85 °C
Storage/transport temperature	-40°C to +85°C
Relative humidity (non-condensing)	10% to 95%
MTBF	n/a
Mechanical construction	
Dimensions (W x H x D)	20 mm x 18 mm x 50 mm
Mounting	SFP slot
Weight	40 g
Protection class	IP 20
Mechanical stability	
IEC 60068-2-27 shock	15 g, 11 ms duration, 18 shocks
IEC 60068-2-6 vibration	1 mm, 2 Hz - 13.2 Hz, 90 min.; 0.7g, 13.2 Hz - 100 Hz, 90 min.; 3.5 mm, 3 Hz - 9 Hz, 10 cycles, 1 octave/min.; 1g, 9 Hz - 150 Hz, 10 cycles, 1 octave/min
EMC interference immunity	
EN 61000-4-2 electrostatic discharge (ESD)	6 kV contact discharge, 8 kV air discharge
EN 61000-4-3 electromagnetic field	10 V/m (80 - 1000 MHz)
EN 61000-4-4 fast transients (burst)	2 kV power line, 1 kV data line
EN 61000-4-5 surge voltage	power line: 2 kV (line/earth), 1 kV (line/line), 1kV data line
EN 61000-4-6 conducted immunity	3 V (10 kHz - 150 kHz), 10 V (150 kHz - 80 MHz)
EMC emitted immunity	
FCC CFR47 Part 15	FCC CFR47 Part 15 Class A
EN 55022	EN 55022 Class A
Approvals	
Shipbuilding	Germanischer Lloyd
Scope of delivery and accessories	
Scope of delivery	SFP module

Industrial Ethernet: System Accessories: Fiberoptic Transceiver: SFP-BIDI Bidirectional Gigabit Ethernet Transceiver: M-SFP-BIDI Type B LX/LC EEC

<http://www.e-catalog.beldensolutions.com/link/57078-24455-24544-24535-65079-65179/en/conf/uistate>

Accessories to order separately

n/a

For more information please contact:

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Product information M-SFP-BIDI-Bundle LH/LC EEC

Industrial Ethernet: System Accessories: Fiberoptic Transceiver: SFP-BIDI Bidirectional Gigabit Ethernet Transceiver: M-SFP-BIDI-Bundle LH/LC EEC

<http://www.e-catalog.beldensolutions.com/link/57078-24455-24544-24535-65079-65082/en/conf/ui/state>

Name	M-SFP-BIDI-Bundle LH/LC EEC
	
	SFP Fiberoptic bi-directional Gigabit Ethernet Transceiver LH, single strand, bundle = 1 x type A and 1 x type B
Delivery informations	
Availability	available
Product description	
Description	SFP Fiberoptic bi-directional Gigabit Ethernet Transceiver LH, single strand, bundle = 1 x type A and 1 x type B
Port type and quantity	1 x 1000BASE-LX with LC connector, extended temperature range
Type	M-SFP-BIDI-Bundle LH/LC EEC
Order No.	943 975-101
Network size - length of cable	
Multimode fiber (MM) 50/125 µm	n/a
Multimode fiber (MM) 62.5/125 µm	n/a
Single mode fiber (SM) 9/125 µm	n/a
Single mode fiber (LH) 9/125 µm (long haul transceiver)	23 km - 80 km, 5 - 24 dB Link Budget (1490 nm type A, 1590 type B) A = 0.25 dB/km, 2 dB Reserve, D = 3.5 ps/(nm x km)
Power requirements	
Operating voltage	power supply via the switch
Power consumption	1 W
Service	
Diagnostics	optical input and output power, transceiver temperature
Ambient conditions	
Operating temperature	-40 °C to +85 °C
Storage/transport temperature	-40°C to +85°C
Relative humidity (non-condensing)	10% to 95%
MTBF	n/a
Mechanical construction	
Dimensions (W x H x D)	20 mm x 18 mm x 50 mm
Mounting	SFP slot
Weight	40 g
Protection class	IP 20
Mechanical stability	
IEC 60068-2-27 shock	15 g, 11 ms duration, 18 shocks
IEC 60068-2-6 vibration	1 mm, 2 Hz - 13.2 Hz, 90 min.; 0.7g, 13.2 Hz - 100 Hz, 90 min.; 3.5 mm, 3 Hz - 9 Hz, 10 cycles, 1 octave/min.; 1g, 9 Hz - 150 Hz, 10 cycles, 1 octave/min
EMC interference immunity	
EN 61000-4-2 electrostatic discharge (ESD)	6 kV contact discharge, 8 kV air discharge
EN 61000-4-3 electromagnetic field	10 V/m (80 - 1000 MHz)
EN 61000-4-4 fast transients (burst)	2 kV power line, 1 kV data line
EN 61000-4-5 surge voltage	power line: 2 kV (line/earth), 1 kV (line/line), 1kV data line
EN 61000-4-6 conducted immunity	3 V (10 kHz - 150 kHz), 10 V (150 kHz - 80 MHz)
EMC emitted immunity	
FCC CFR47 Part 15	FCC CFR47 Part 15 Class A
EN 55022	EN 55022 Class A
Approvals	
Shipbuilding	Germanischer Lloyd
Scope of delivery and accessories	
Scope of delivery	SFP module

Industrial Ethernet: System Accessories: Fiberoptic Transceiver: SFP-BIDI Bidirectional Gigabit Ethernet Transceiver: M-SFP-BIDI-Bundle LH/LC EEC

<http://www.e-catalog.beldensolutions.com/link/57078-24455-24544-24535-65079-65082/en/conf/uistate>

Accessories to order separately	n/a
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Product information M-SFP-BIDI-Bundle LX/LC EEC

Industrial Ethernet: System Accessories: Fiberoptic Transceiver: SFP-BIDI Bidirectional Gigabit Ethernet Transceiver: M-SFP-BIDI-Bundle LX/LC EEC

<http://www.e-catalog.beldensolutions.com/link/57078-24455-24544-24535-65079-65028/en/conf/ui/state>

Name	M-SFP-BIDI-Bundle LX/LC EEC
	
	SFP Fiberoptic bi-directional Gigabit Ethernet Transceiver SM, single strand, bundle = 1 x type A and 1 x type B
Delivery informations	
Availability	available
Product description	
Description	SFP Fiberoptic bi-directional Gigabit Ethernet Transceiver SM, single strand, bundle = 1 x type A and 1 x type B
Port type and quantity	1 x 1000BASE-LX with LC connector, extended temperature range
Type	M-SFP-BIDI-Bundle LX/LC EEC
Order No.	943 974-101
Network size - length of cable	
Multimode fiber (MM) 50/125 µm	n/a
Multimode fiber (MM) 62.5/125 µm	n/a
Single mode fiber (SM) 9/125 µm	0 m - 20 km, 0 - 11 dB Link Budget (1310nm type A, 1550 nm type B) A = 0.4 dB/km, 3 dB Reserve, D = 3.5 ps / (nm x km)
Single mode fiber (LH) 9/125 µm (long haul transceiver)	n/a
Power requirements	
Operating voltage	power supply via the switch
Power consumption	1 W
Service	
Diagnostics	optical input and output power, transceiver temperature
Ambient conditions	
Operating temperature	-40 °C to +85 °C
Storage/transport temperature	-40°C to +85°C
Relative humidity (non-condensing)	10% to 95%
MTBF	n/a
Mechanical construction	
Dimensions (W x H x D)	20 mm x 18 mm x 50 mm
Mounting	SFP slot
Weight	40 g
Protection class	IP 20
Mechanical stability	
IEC 60068-2-27 shock	15 g, 11 ms duration, 18 shocks
IEC 60068-2-6 vibration	1 mm, 2 Hz - 13.2 Hz, 90 min.; 0.7g, 13.2 Hz - 100 Hz, 90 min.; 3.5 mm, 3 Hz - 9 Hz, 10 cycles, 1 octave/min.; 1g, 9 Hz - 150 Hz, 10 cycles, 1 octave/min
EMC interference immunity	
EN 61000-4-2 electrostatic discharge (ESD)	6 kV contact discharge, 8 kV air discharge
EN 61000-4-3 electromagnetic field	10 V/m (80 - 1000 MHz)
EN 61000-4-4 fast transients (burst)	2 kV power line, 1 kV data line
EN 61000-4-5 surge voltage	power line: 2 kV (line/earth), 1 kV (line/line), 1kV data line
EN 61000-4-6 conducted immunity	3 V (10 kHz - 150 kHz), 10 V (150 kHz - 80 MHz)
EMC emitted immunity	
FCC CFR47 Part 15	FCC CFR47 Part 15 Class A
EN 55022	EN 55022 Class A
Approvals	
Safety of industrial control equipment	cUL 508
Hazardous locations	ISA 12.12.01 Class 1 Div. 2
Shipbuilding	Germanischer Lloyd

Industrial Ethernet: System Accessories: Fiberoptic Transceiver: SFP-BIDI Bidirectional Gigabit Ethernet Transceiver: M-SFP-BIDI-Bundle LX/LC EEC

<http://www.e-catalog.beldensolutions.com/link/57078-24455-24544-24535-65079-65028/en/conf/uistate>

Scope of delivery and accessories

Scope of delivery	SFP module
Accessories to order separately	n/a

For more information please contact:

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