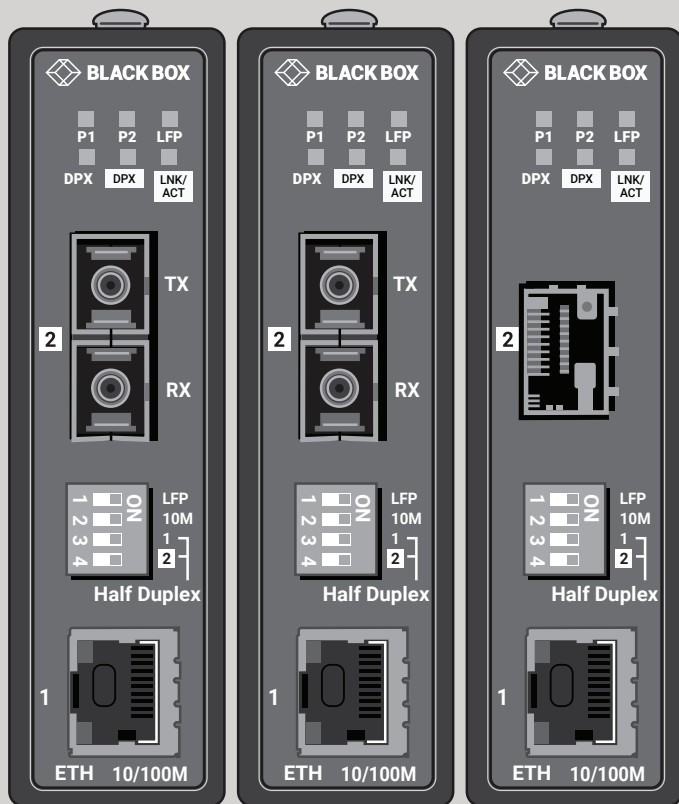LMC280A, LMC281A, LMC282A, LGC280A, LGC281A, LGC282A

INDUSTRIAL MEDIA CONVERTERS

24/7 TECHNICAL SUPPORT AT 877.877.2269 OR VISIT BLACKBOX.COM

BLACK BOX

OVERVIEW

INDUSTRIAL MEDIA CONVERTERS DATA SHEET

INTRODUCTION

The Fast Ethernet Industrial Media Converters convert a 10/100BASE-T(X) interface to a 100BASE-FX interface to allow you to extend communication distance using optical fiber. The Gigabit Ethernet Industrial Media Converters convert a 10/100/1000BASE-T(X) interface to a 1000BASE-FX interface.

Six models are available:

– FAST ETHERNET INDUSTRIAL MEDIA CONVERTER SFP (LMC280A)

– FAST ETHERNET INDUSTRIAL MEDIA CONVERTER MM SC (LMC281A)

– FAST ETHERNET INDUSTRIAL MEDIA CONVERTER SM SC (LMC282A)

– GIGABIT ETHERNET INDUSTRIAL MEDIA CONVERTER SFP (LGC280A)

– GIGABIT ETHERNET INDUSTRIAL MEDIA CONVERTER MM SC (LGC281A)

– GIGABIT ETHERNET INDUSTRIAL MEDIA CONVERTER SM SC (LGC282A)

Both the Fast Etherent and Gigabit Ethernet Media Converters are encased in a rigid IP-30 housing and have a wide operating temperature range from -40 to 158° F (-40 to 70° C) for use in harsh industrial environments.

The converters have dual power inputs, each accepting a wide voltage range from 12 to 48 VDC.

The Fast Ethernet models also support the LFP (Link Fault Pass-through) feature. When one side of the link fails, the other side continues transmitting packets. Use the DIP-Switch to enable the LFP function.

FEATURES

- FAST ETHERNET MODELS SUPPORT ONE 10/100BASE-T(X) AUTO-NEGOTIATION AND AUTO-MDI/MDI-X PORT
- GIGABIT MODELS SUPPORT ONE 10/100/1000BASE-T(X) AUTO-NEGOTIATION AND AUTO-MDI/MDI-X PORT
- FAST ETHERNET MODELS PROVIDE ONE 100BASE-X MULTIMODE/SINGLE-MODE OR SFP PORT
- GIGABIT MODELS PROVIDE ONE 1000BASE-X MULTIMODE/ SINGLE-MODE OR SFP PORT
- ALL MODELS SUPPORT ETHERNET TO FIBER OR ETHERNET TO SFP PORT
- FAST ETHERNET MODELS OFFER LFP (LINK FAULT PASS-THROUGH) FUNCTION VIA A DIP SWITCH
- ALL MODELS OPERATE IN FULL/HALF DUPLEX MODE
- ALL MODELS USE STORE-AND-FORWARD TRANSMISSION
- ALL HAVE HIGHLY RELIABLE RIGID IP-30 HOUSING
- ALL MOUNT ON A DIN-RAIL OR WALL
- GIGABIT MODELS SUPPORT JUMBO FRAME UP TO 10240 BYTES
- GIGABIT MODELS HAVE A RELAY OUTPUT TO CARRY CAPACITY OF 1 A AT 24 VDC

COMPARISON CHART

SPECIFICATION COMPARISON CHART						
	LMC280A	**LMC281A**	**LMC282A**	**LGC280A**	**LGC281A**	**LGC282A**
CONNECTORS	SFP SLOT	MM SC	SM SC	SFP SLOT	MM SC	SM SC
SPEED	100 MBPS	100 MBPS	100 MBPS	1 GBPS	1 GBPS	1 GBPS
LFP FUNCTION	YES	YES	YES	NO	NO	NO
RELAY OUTPUT	NO	NO	NO	YES	YES	YES
OPERATING TEMPERATURE	-40 TO +158° F (-40 TO +70° C)	-40 TO +158° F (-40 TO +70° C)	-40 TO +158° F (-40 TO +70° C)	-40 TO +158° F (-40 TO +70° C)	-40 TO +158° F (-40 TO +70° C)	-40 TO +158° F (-40 TO +70° C)
POWER INPUTS	DUAL 12 TO 48 VDC	DUAL 12 TO 48 VDC	DUAL 12 TO 48 VDC	DUAL 12 TO 48 VDC	DUAL 12 TO 48 VDC	DUAL 12 TO 48 VDC

1.877.877.2269   BLACKBOX.COM

SPECIFICATIONS

FAST ETHERNET INDUSTRIAL MEDIA CONVERTER SFP (LMC280A)

FRONT VIEW

LMC280A

BACK VIEW

LMC280A

TOP VIEW

LMC280A

WHAT'S INCLUDED WITH THE LMC280A

- **(1) FAST ETHERNET MEDIA CONVERTER SFP**
- **(1) WALLMOUNTING KIT (2 BRACKETS, 8 SCREWS)**
- **(1) DIN RAIL MOUNTING KIT (INSTALLED)**
- **(1) 6-POSITION PHOENIX CONNECTOR**
- **(1) DUST COVER**

YOU WILL ALSO NEED

- **(1) FIBER SFP MODULE**
- **(1) POWER SUPPLY**

COMPATIBLE FIBER SFP MODULES		
PART NUMBER	**DESCRIPTION**	**DISTANCE**
100-MBPS CONNECTIONS		
LFP401	SFP/155 Extended Diagnostics, 850-nm, Multimode, LC	2 km
LFP402	SFP/155 Extended Diagnostics, 1310-nm, Multimode, LC	2 km
LFP403	SFP/155 Extended Diagnostics, 1310-nm, Single-mode, LC	30 km
LFP404	SFP/155 Extended Diagnostics, 1310-nm, Single-mode, LC	60 km

NOTE: Black Box media converters will also support generic SFP modules.

FAST ETHERNET INDUSTRIAL MEDIA CONVERTER SFP (LMC280A) SPECIFICATIONS	
PHYSICAL PORTS	
CONNECTORS	(1) 10/100BASE-TX RJ-45 Auto MDI/MDIX port; (1) SFP cage
FIBER PORT SPECIFICATIONS	Depend on SFP installed
TECHNOLOGY	
ETHERNET STANDARDS	IEEE 802.3 for 10BASE-T IEEE 802.3u for 100BASE-TX and 100BASE-FX IEEE 802.3x for Flow control
PROCESSING	Store-and-Forward

DIP SWITCH SETTING	DIP-Switch 1 for LFP mode selection:
	  ON: enable;
	  OFF: disable
	DIP-Switch 2 for Ethernet speed selection:
	  ON: 10 Mbps;
	  OFF: 10/100 Mbps Auto-negotiate
	DIP-Switch 3 for Ethernet full/half duplex selection:
	  ON: Half-duplex;
	  OFF: Full/Half-Duplex Auto-negotiate
	DIP-Switch 4 for fiber full/half duplex selection:
	  ON: Half-Duplex;
	  OFF: Full-Duplex

SPECIFICATIONS

FAST ETHERNET INDUSTRIAL MEDIA CONVERTER SFP (LMC280A) (CONTINUED)

FAST ETHERNET INDUSTRIAL MEDIA CONVERTER SFP (LMC280A) SPECIFICATIONS (CONTINUED)	
LED INDICATORS	
POWER LED	(2) Power LEDs (Green)

10/100BASE-TX RJ-45 PORT LED	Green for port Link/Act:
	  ON: Link up;
	  Blinking: Acting;
	  OFF: Link down
	Amber for 100 Mbps/10 Mbps indicator:
	  ON: Link at 100 Mbps;
	  OFF: Link at 10 Mbps
	Green for port duplex indicator:
	  ON: Full-Duplex;
	  OFF: Half-Duplex

100BASE-FX FIBER PORT LED	Green for fiber port Link/Act:
	  ON: Link up;
	  Flash: Acting;
	  OFF: Link down
	Green for fiber port duplex indicator:
	  ON: Full-Duplex;
	  OFF: Half-Duplex

LFP STATUS LED	Amber LED:
	  ON: LFP function fail;
	  OFF: LFP function disable

POWER	
INPUT POWER	Dual 12–48 VDC power input at 4-pin terminal block
POWER CONSUMPTION (TYP.)	2.2 Watts
OVERLOAD CURRENT PROTECTION	Present
REVERSE POLARITY PROTECTION	Present on terminal block
PHYSICAL CHARACTERISTICS	
ENCLOSURE	IP-30
DIMENSIONS	3.74" H x 1.03" W x 2.76" D (9.5 x 2.6 x 7.0 cm)
WEIGHT	0.47 lb. (213 g)
ENVIRONMENTAL	
STORAGE TEMPERATURE	-40 to +185 F (-40 to +85°C)
OPERATING TEMPERATURE	-40 to +158°F (-40 to +70° C)
OPERATING HUMIDITY	5 to 95%, noncondensing
REGULATORY APPROVALS	
EMI	FCC Part 15, CISPR (EN55022) class A
EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11
SHOCK	IEC60068-2-27
FREE FALL	IEC60068-2-32
VIBRATION	IEC60068-2-6
SAFETY	EN60950-1

SPECIFICATIONS

FAST ETHERNET INDUSTRIAL MEDIA CONVERTER MM SC (LMC281A)

FRONT VIEW

LMC281A

BACK VIEW

LMC281A

TOP VIEW

LMC281A

WHAT'S INCLUDED WITH THE LMC281A

- (1) FAST ETHERNET INDUSTRIAL MEDIA CONVERTER MM SC
- (1) WALLMOUNTING KIT (2 BRACKETS, 8 SCREWS)
- (1) DIN RAIL MOUNTING KIT (INSTALLED)
- (1) 6-POSITION PHOENIX CONNECTOR
- (1) DUST COVER

YOU WILL ALSO NEED

- (1) POWER SUPPLY

FAST ETHERNET INDUSTRIAL MEDIA CONVERTER MM SC (LMC281A) SPECIFICATIONS	
PHYSICAL PORTS	
CONNECTORS	(1) 10/100BASE-TX RJ-45 Auto MDI/MDIX port; (1) Multimode SC port
FIBER PORTS SPECIFICATIONS	
STANDARD	100BASE-FX
MODE	Multimode
FIBER DIAMETER	62.5/125 µm; 50/125 µm
TYPICAL DISTANCE	2 km
WAVELENGTH	1310 nm
MAXIMUM OUTPUT OPTICAL POWER	-14 dBm
MINIMUM OUTPUT OPTICAL POWER	-23.5 dBm
MAXIMUM INPUT OPTICAL POWER (SATURATION)	0 dBm
MINIMUM INPUT OPTICAL POWER (SENSITIVITY)	-31 dBm
LINK BUDGET	7.5 dB
TECHNOLOGY	
ETHERNET STANDARDS	IEEE 802.3 for 10BASE-T IEEE 802.3u for 100BASE-TX and 100BASE-FX IEEE 802.3x for Flow control
PROCESSING	Store-and-Forward
DIP SWITCH SETTING	DIP-Switch 1 for LFP mode selection: ON: enable; OFF: disable DIP-Switch 2 for Ethernet speed selection: ON: 10 Mbps; OFF: 10/100 Mbps Auto-negotiate DIP-Switch 3 for Ethernet full/half duplex selection: ON: Half-duplex; OFF: Full/Half-Duplex Auto-negotiate DIP-Switch 4 for fiber full/half duplex selection: ON: Half-Duplex; OFF: Full-Duplex

SPECIFICATIONS

FAST ETHERNET INDUSTRIAL MEDIA CONVERTER MM SC (LMC281A) (CONTINUED)

FAST ETHERNET INDUSTRIAL MEDIA CONVERTER MM SC (LMC281A) SPECIFICATIONS (CONTINUED)	
LED INDICATORS	
POWER LED	(2) Power LEDs (Green)

10/100BASE-TX RJ-45 PORT LED	Green for port Link/Act:
	  ON: Link up;
	  Blinking: Acting;
	  OFF: Link down
	Amber for 100 Mbps/10 Mbps indicator:
	  ON: Link at 100 Mbps;
	  OFF: Link at 10 Mbps
	Green for port duplex indicator:
	  ON: Full-Duplex;
	  OFF: Half-Duplex

100BASE-FX FIBER PORT LED	Green for fiber port Link/Act:
	  ON: Link up;
	  Flash: Acting;
	  OFF: Link down
	Green for fiber port duplex indicator:
	  ON: Full-Duplex;
	  OFF: Half-Duplex

LFP STATUS LED	Amber LED:
	  ON: LFP function fail;
	  OFF: LFP function disable

POWER	
INPUT POWER	Dual 12–48 VDC power input at 4-pin terminal block
POWER CONSUMPTION (TYP.)	2.2 Watts
OVERLOAD CURRENT PROTECTION	Present
REVERSE POLARITY PROTECTION	Present on terminal block
PHYSICAL CHARACTERISTICS	
ENCLOSURE	IP-30
DIMENSIONS	3.74" H x 1.03" W x 2.76" D (9.5 x 2.6 x 7.0 cm)
WEIGHT	0.48 lb. (218 g)
ENVIRONMENTAL	
STORAGE TEMPERATURE	-40 to +185 F (-40 to +85°C)
OPERATING TEMPERATURE	-40 to +158°F (-40 to +70° C)
OPERATING HUMIDITY	5 to 95%, noncondensing
REGULATORY APPROVALS	
EMI	FCC Part 15, CISPR (EN55022) class A
EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11
SHOCK	IEC60068-2-27
FREE FALL	IEC60068-2-32
VIBRATION	IEC60068-2-6
SAFETY	EN60950-1

1.877.877.2269   BLACKBOX.COM

SPECIFICATIONS

FAST ETHERNET INDUSTRIAL MEDIA CONVERTER SM SC (LMC282A)

FRONT VIEW

LMC282A

BACK VIEW

LMC282A

TOP VIEW

LMC282A

WHAT'S INCLUDED WITH THE LMC282A

- **(1) FAST ETHERNET INDUSTRIAL MEDIA CONVERTER SM SC**
- **(1) WALLMOUNTING KIT (2 BRACKETS, 8 SCREWS)**
- **(1) DIN RAIL MOUNTING KIT (INSTALLED)**
- **(1) 6-POSITION PHOENIX CONNECTOR**
- **(1) DUST COVER**

YOU WILL ALSO NEED

- **(1) POWER SUPPLY**

FAST ETHERNET INDUSTRIAL MEDIA CONVERTER SM SC (LMC282A) SPECIFICATIONS	
PHYSICAL PORTS	
CONNECTORS	(1) 10/100BASE-TX RJ-45 Auto MDI/MDIX port; (1) Single-mode SC port
FIBER PORTS SPECIFICATIONS	
STANDARD	100BASE-FX
MODE	Single-mode
FIBER DIAMETER	9/125 µm
TYPICAL DISTANCE	30 km
WAVELENGTH	1310 nm
MAXIMUM OUTPUT OPTICAL POWER	-8 dBm
MINIMUM OUTPUT OPTICAL POWER	-15 dBm
MAXIMUM INPUT OPTICAL POWER (SATURATION)	0 dBm
MINIMUM INPUT OPTICAL POWER (SENSITIVITY)	-34 dBm
LINK BUDGET	19 dB
TECHNOLOGY	
ETHERNET STANDARDS	IEEE 802.3 for 10BASE-T IEEE 802.3u for 100BASE-TX and 100BASE-FX IEEE 802.3x for Flow control
PROCESSING	Store-and-Forward

DIP SWITCH SETTING	DIP-Switch 1 for LFP mode selection:
	  ON: enable;
	  OFF: disable
	DIP-Switch 2 for Ethernet speed selection:
	  ON: 10 Mbps;
	  OFF: 10/100 Mbps Auto-negotiate
	DIP-Switch 3 for Ethernet full/half duplex selection:
	  ON: Half-duplex;
	  OFF: Full/Half-Duplex Auto-negotiate
	DIP-Switch 4 for fiber full/half duplex selection:
	  ON: Half-Duplex;
	  OFF: Full-Duplex

SPECIFICATIONS

FAST ETHERNET INDUSTRIAL MEDIA CONVERTER SM SC (LMC282A) (CONTINUED)

FAST ETHERNET INDUSTRIAL MEDIA CONVERTER SM SC (LMC282A) SPECIFICATIONS (CONTINUED)	
LED INDICATORS	
POWER LED	(2) Power LEDs (Green)

10/100BASE-TX RJ-45 PORT LED	Green for port Link/Act:
	  ON: Link up;
	  Blinking: Acting;
	  OFF: Link down
	Amber for 100 Mbps/10 Mbps indicator:
	  ON: Link at 100 Mbps;
	  OFF: Link at 10 Mbps
	Green for port duplex indicator:
	  ON: Full-Duplex;
	  OFF: Half-Duplex

100BASE-FX FIBER PORT LED	Green for fiber port Link/Act:
	  ON: Link up;
	  Flash: Acting;
	  OFF: Link down
	Green for fiber port duplex indicator:
	  ON: Full-Duplex;
	  OFF: Half-Duplex

LFP STATUS LED	Amber LED:
	  ON: LFP function fail;
	  OFF: LFP function disable

POWER	
INPUT POWER	Dual 12–48 VDC power input at 4-pin terminal block
POWER CONSUMPTION (TYP.)	2.2 Watts
OVERLOAD CURRENT PROTECTION	Present
REVERSE POLARITY PROTECTION	Present on terminal block
PHYSICAL CHARACTERISTICS	
ENCLOSURE	IP-30
DIMENSIONS	3.74" H x 1.03" W x 2.76" D (9.5 x 2.6 x 7.0 cm)
WEIGHT	0.48 lb. (218 g)
ENVIRONMENTAL	
STORAGE TEMPERATURE	-40 to +185 F (-40 to +85°C)
OPERATING TEMPERATURE	-40 to +158°F (-40 to +70° C)
OPERATING HUMIDITY	5 to 95%, noncondensing
REGULATORY APPROVALS	
EMI	FCC Part 15, CISPR (EN55022) class A
EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11
SHOCK	IEC60068-2-27
FREE FALL	IEC60068-2-32
VIBRATION	IEC60068-2-6
SAFETY	EN60950-1

SPECIFICATIONS

GIGABIT ETHERNET INDUSTRIAL MEDIA CONVERTER SFP (LGC280A)

FRONT VIEW

LGC280A

BACK VIEW

LGC280A

TOP VIEW

LGC280A

WHAT'S INCLUDED WITH THE LGC280A

- (1) GIGABIT ETHERNET MEDIA CONVERTER SFP
- (1) WALLMOUNTING KIT (2 BRACKETS, 8 SCREWS)
- (1) DIN RAIL MOUNTING KIT (INSTALLED)
- (1) 6-POSITION PHOENIX CONNECTOR
- (1) DUST COVER

YOU WILL ALSO NEED

- (1) FIBER SFP MODULE
- (1) POWER SUPPLY

COMPATIBLE FIBER SFP MODULES		
PART NUMBER	DESCRIPTION	DISTANCE
1-GBPS CONNECTIONS		
LFP411	SFP 1250-Mbps, 850-nm Multimode Fiber, LC	550 m
LFP412	SFP 1250-Mbps, 1310-nm Multimode Fiber, LC	2 km
LFP413	SFP 1250-Mbps, 1310-nm Single-mode Fiber, LC	10 km
LFP414	SFP 1250-Mbps, 1310-nm Single-mode Fiber, LC	40 km
LFP418	SFP 1250, Extended Diagnostics, 1550-nm Single-mode Fiber, LC	80 km
LFP420	SFP 1250-Mbps, 1550-nm TX, 1310-nm RX, Single-Mode Fiber, Simplex LC	10 km
LFP421	SFP 1250-Mbps, 1310-nm TX, 1550-nm RX, Single-Mode Fiber, Simplex LC	10 km

NOTE: Black Box media converters will also support generic SFP modules.

GIGABIT ETHERNET INDUSTRIAL MEDIA CONVERTER SFP (LGC280A) SPECIFICATIONS	
PHYSICAL PORTS	
CONNECTORS	(1) 10/100/1000BASE-TX RJ-45 Auto MDI/MDIX port; (1) SFP cage
FIBER PORT SPECIFICATIONS	Depend on SFP installed
TECHNOLOGY	
ETHERNET STANDARDS	IEEE 802.3 for 10BASE-T IEEE 802.3u for 100BASE-TX IEEE 802.3ab for 1000BASE-T IEEE 802.3z for 1000BASE-X
JUMBO FRAME	10240 bytes
LED INDICATORS	
POWER LED	(2) Power LEDs (Green)
FAULT LED	Amber: Indicates power failure
10/100/1000BASE-TX RJ-45 PORT LED	Green for port Link/Act; Amber for 100 Mbps indicator
1000BASE-FX FIBER PORT LED	Green for port Link/Act
FAULT CONTACT	
RELAY	Relay output to carry capacity of 1A at 24 VDC
DIP SWITCH	Relay output function enable/disable by DIP switch

SPECIFICATIONS

GIGABIT ETHERNET INDUSTRIAL MEDIA CONVERTER SFP (LGC280A) (CONTINUED)

GIGABIT ETHERNET INDUSTRIAL MEDIA CONVERTER SFP (LGC280A) SPECIFICATIONS (CONTINUED)	
POWER	
INPUT POWER	Dual 12–48 VDC power input at 4-pin terminal block
POWER CONSUMPTION (TYP.)	3.5 Watts
OVERLOAD CURRENT PROTECTION	Present
REVERSE POLARITY PROTECTION	Present
PHYSICAL CHARACTERISTICS	
ENCLOSURE	IP-30
DIMENSIONS	5.68" H x 1.03" W x 3.74" D (14.4 x 2.6 x 9.4 cm)
WEIGHT	0.83 lb. (380 g)
ENVIRONMENTAL	
STORAGE TEMPERATURE	-40 to +185 F (-40 to +85°C)
OPERATING TEMPERATURE	-40 to +158°F (-40 to +70° C)
OPERATING HUMIDITY	5 to 95%, noncondensing
REGULATORY APPROVALS	
EMI	FCC Part 15, CISPR (EN55022) class A
EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11
SHOCK	IEC60068-2-27
FREE FALL	IEC60068-2-32
VIBRATION	IEC60068-2-6
SAFETY	EN60950-1
MTBF	650,069 hours

1.877.877.2269   BLACKBOX.COM

SPECIFICATIONS

GIGABIT ETHERNET INDUSTRIAL MEDIA CONVERTER MM SC (LGC281A)

FRONT VIEW

LGC281A

BACK VIEW

LGC281A

TOP VIEW

LGC281A

WHAT'S INCLUDED WITH THE LGC281A

- **(1) GIGABIT ETHERNET INDUSTRIAL MEDIA CONVERTER MM SC**
- **(1) WALLMOUNTING KIT (2 BRACKETS, 8 SCREWS)**
- **(1) DIN RAIL MOUNTING KIT (INSTALLED)**
- **(1) 6-POSITION PHOENIX CONNECTOR**
- **(1) DUST COVER**

YOU WILL ALSO NEED

- **(1) POWER SUPPLY**

GIGABIT ETHERNET INDUSTRIAL MEDIA CONVERTER MM SC (LGC281A) SPECIFICATIONS	
PHYSICAL PORTS	
CONNECTORS	(1) 10/100/1000BASE-TX RJ-45 Auto MDI/MDIX port; (1) Multimode SC port
FIBER PORTS SPECIFICATIONS	
STANDARD	1000BASE-SX
MODE	Multimode
FIBER DIAMETER	62.5/125 µm; 50/125 µm
TYPICAL DISTANCE	550 m
WAVELENGTH	850 nm
MAXIMUM OUTPUT OPTICAL POWER	-4 dBm
MINIMUM OUTPUT OPTICAL POWER	-9.5 dBm
MAXIMUM INPUT OPTICAL POWER (SATURATION)	0 dBm
MINIMUM INPUT OPTICAL POWER (SENSITIVITY)	-18 dBm
LINK BUDGET	8.5 dB
TECHNOLOGY	
ETHERNET STANDARDS	IEEE 802.3 for 10BASE-T IEEE 802.3u for 100BASE-TX IEEE 802.3ab for 1000BASE-T IEEE 802.3z for 1000BASE-X
JUMBO FRAME	10240 bytes
LED INDICATORS	
POWER LED	(2) Power LEDs (Green)
FAULT LED	Amber: Indicates power failure
10/100/1000BASE-TX RJ-45 PORT LED	Green for port Link/Act; Amber for 100 Mbps indicator
1000BASE-FX FIBER PORT LED	Green for port Link/Act
FAULT CONTACT	
RELAY	Relay output to carry capacity of 1A at 24 VDC
DIP SWITCH	Relay output function enable/disable by DIP switch

SPECIFICATIONS

GIGABIT ETHERNET INDUSTRIAL MEDIA CONVERTER MM SC (LGC281A) (CONTINUED)

GIGABIT ETHERNET INDUSTRIAL MEDIA CONVERTER MM SC (LGC281A) SPECIFICATIONS (CONTINUED)	
POWER	
INPUT POWER	Dual 12–48 VDC power input at 4-pin terminal block
POWER CONSUMPTION (TYP.)	3.5 Watts
OVERLOAD CURRENT PROTECTION	Present
REVERSE POLARITY PROTECTION	Present
PHYSICAL CHARACTERISTICS	
ENCLOSURE	IP-30
DIMENSIONS	5.68" H x 1.03" W x 3.74" D (14.4 x 2.6 x 9.4 cm)
WEIGHT	0.88 lb. (400 g)
ENVIRONMENTAL	
STORAGE TEMPERATURE	-40 to +185 F (-40 to +85°C)
OPERATING TEMPERATURE	-40 to +158°F (-40 to +70° C)
OPERATING HUMIDITY	5 to 95%, noncondensing
REGULATORY APPROVALS	
EMI	FCC Part 15, CISPR (EN55022) class A
EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11
SHOCK	IEC60068-2-27
FREE FALL	IEC60068-2-32
VIBRATION	IEC60068-2-6
SAFETY	EN60950-1
MTBF	597,923 hours

1.877.877.2269   BLACKBOX.COM

SPECIFICATIONS

GIGABIT ETHERNET INDUSTRIAL MEDIA CONVERTER SM SC (LGC282A)

FRONT VIEW

LGC282A

BACK VIEW

LGC282A

TOP VIEW

LGC282A

WHAT'S INCLUDED WITH THE LGC282A

- **(1) GIGABIT ETHERNET INDUSTRIAL MEDIA CONVERTER SM SC**
- **(1) WALLMOUNTING KIT (2 BRACKETS, 8 SCREWS)**
- **(1) DIN RAIL MOUNTING KIT (INSTALLED)**
- **(1) 6-POSITION PHOENIX CONNECTOR**
- **(1) DUST COVER**

YOU WILL ALSO NEED

- **(1) POWER SUPPLY**

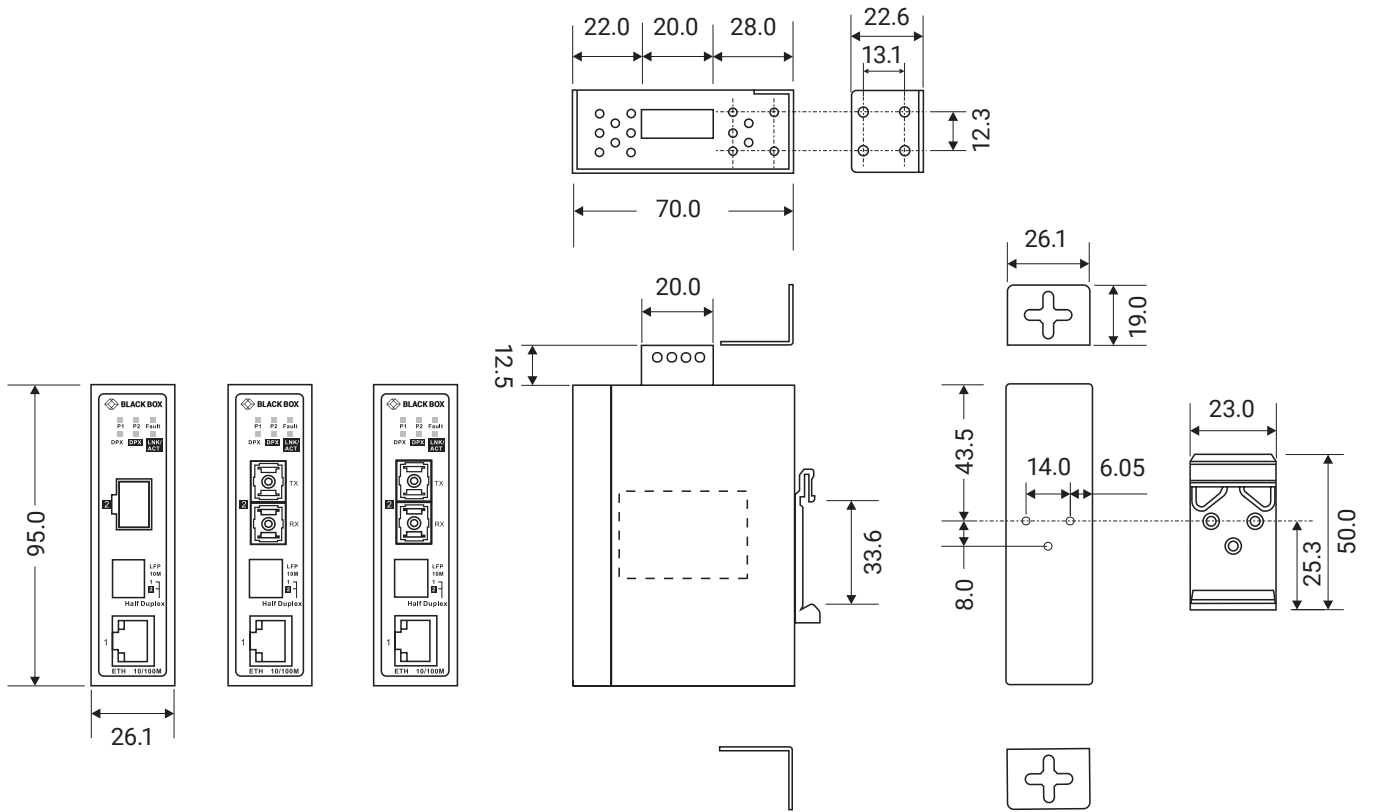| GIGABIT ETHERNET INDUSTRIAL MEDIA CONVERTER SM SC (LGC282A) SPECIFICATIONS	
PHYSICAL PORTS	
CONNECTORS	(1) 10/100/1000BASE-TX RJ-45 Auto MDI/MDIX port; (1) Single-mode SC port
FIBER PORTS SPECIFICATIONS	
STANDARD	1000BASE-LX
MODE	Single-mode
FIBER DIAMETER	9/125 µm
TYPICAL DISTANCE	10 km
WAVELENGTH	1310 nm
MAXIMUM OUTPUT OPTICAL POWER	-3 dBm
MINIMUM OUTPUT OPTICAL POWER	-9.5 dBm
MAXIMUM INPUT OPTICAL POWER (SATURATION)	-3 dBm
MINIMUM INPUT OPTICAL POWER (SENSITIVITY)	-20 dBm
LINK BUDGET	10.5 dB
TECHNOLOGY	
ETHERNET STANDARDS	IEEE 802.3 for 10BASE-T IEEE 802.3u for 100BASE-TX IEEE 802.3ab for 1000BASE-T IEEE 802.3z for 1000BASE-X
JUMBO FRAME	10240 bytes
LED INDICATORS	
POWER LED	(2) Power LEDs (Green)
FAULT LED	Amber: Indicates power failure
10/100/1000BASE-TX RJ-45 PORT LED	Green for port Link/Act; Amber for 100 Mbps indicator
1000BASE-FX FIBER PORT LED	Green for port Link/Act
FAULT CONTACT	
RELAY	Relay output to carry capacity of 1A at 24 VDC
DIP SWITCH	Relay output function enable/disable by DIP switch

SPECIFICATIONS

GIGABIT ETHERNET INDUSTRIAL MEDIA CONVERTER SM SC (LGC282A)

GIGABIT ETHERNET INDUSTRIAL MEDIA CONVERTER SM SC (LGC282A) SPECIFICATIONS (CONTINUED)	
POWER	
INPUT POWER	Dual 12–48 VDC power input at 4-pin terminal block
POWER CONSUMPTION (TYP.)	3.5 Watts
OVERLOAD CURRENT PROTECTION	Present
REVERSE POLARITY PROTECTION	Present
PHYSICAL CHARACTERISTICS	
ENCLOSURE	IP-30
DIMENSIONS	5.68" H x 1.03" W x 3.74" D (14.4 x 2.6 x 9.4 cm)
WEIGHT	0.88 lb. (400 g)
ENVIRONMENTAL	
STORAGE TEMPERATURE	-40 to +185 F (-40 to +85°C)
OPERATING TEMPERATURE	-40 to +158°F (-40 to +70° C)
OPERATING HUMIDITY	5 to 95%, noncondensing
REGULATORY APPROVALS	
EMI	FCC Part 15, CISPR (EN55022) class A
EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11
SHOCK	IEC60068-2-27
FREE FALL	IEC60068-2-32
VIBRATION	IEC60068-2-6
SAFETY	EN60950-1
MTBF	611,417 hours

1.877.877.2269   BLACKBOX.COM
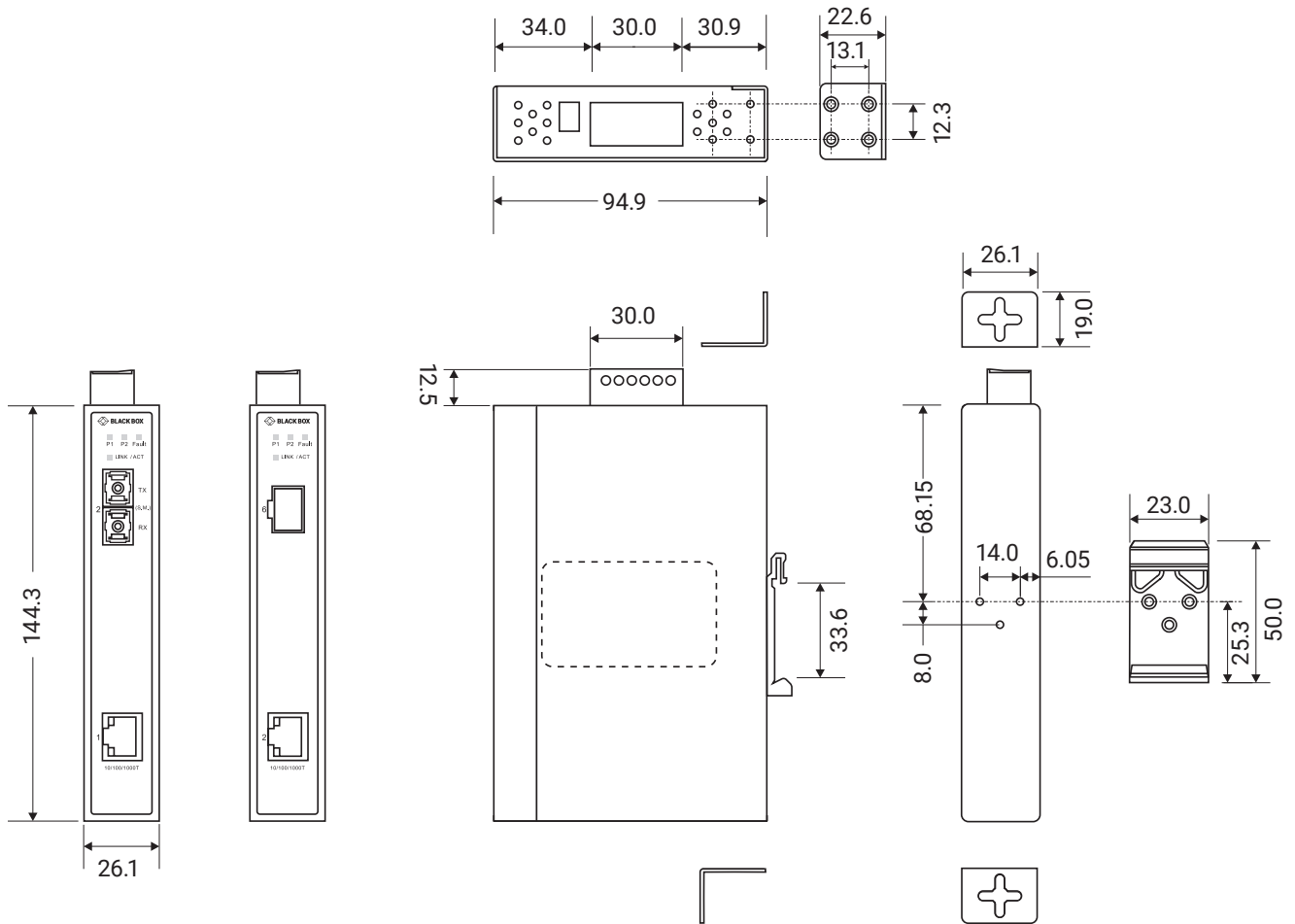
DIMENSIONAL DIAGRAMS

FAST ETHERNET INDUSTRIAL MEDIA CONVERTERS (LMC280A, LMC281A, LMC282A)

NOTE: DImensions are in millimeters (mm).

DIMENSIONAL DIAGRAMS

GIGABIT ETHERNET INDUSTRIAL MEDIA CONVERTERS (LGC280A, LGC281A, LGC282A)

NOTE: DImensions are in millimeters (mm).

1.877.877.2269   BLACKBOX.COM

ORDERING INFORMATION

ITEM	CODE
Fast Ethernet Industrial Media Converters	
SFP	**LMC280A**
Multimode SC (MM SC)	**LMC281A**
Single-mode SC (SM SC)	**LMC282A**
Gigabit Ethernet Industrial Media Converters	
SFP	**LGC280A**
Multimode SC (MM SC)	**LGC281A**
Single-mode SC (SM SC)	**LGC282A**

ABOUT BLACK BOX

Black Box is a world leading technology solutions provider specializing in complete high-performance KVM, professional A/V signal distribution and extension and switching solutions for mission-critical applications. Black Box is dedicated to delivering superior project engineering, technical support, and 24/7 customer service you can rely on for your most critical operations.

Every day, our customers trust us to design, integrate, and maintain reliable control room solutions for broadcasting, post-production, stadiums & arenas, medical, air traffic control, oil & gas, government & military, and utility industries. Leave the tech to us and our comprehensive technology solutions will deliver secure connections, fast-response times, real-time collaboration and more.

NOTES