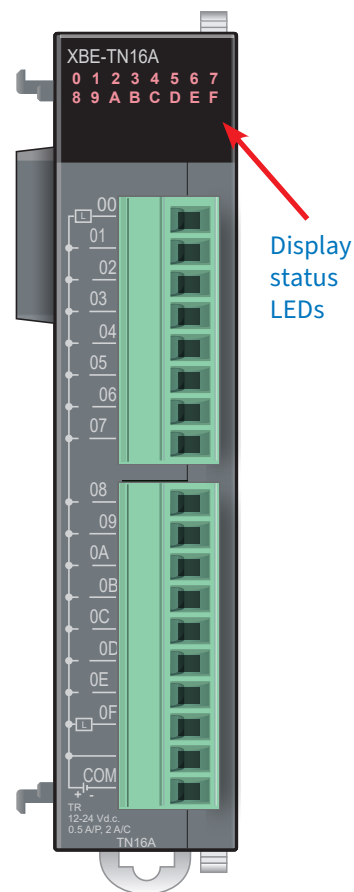


## XBE-TN16A Digital Output Module

Part Number	Price	Classification	Description	Drawing
<b>XBE-TN16A</b>	\$78.00	Digital Output	LS Electric XGB discrete output module, 16-point, 12-24 VDC, sinking, 1 common(s), 16 point(s) per common, 0.5A/point, 2A/common. Removable terminal blocks included.	PDF

General Specifications		XBE-TN16A
<b>Input Point</b>		16 point
<b>Insulation Method</b>		Photo coupler insulation
<b>Rated Load Voltage</b>		12/24 VDC
<b>Load Voltage Range</b>		10.2 – 26.4 VDC
<b>Maximum Load Current</b>		0.5 A / 1 point, 2A / 1COM
<b>Off Leakage Current</b>		0.1 mA or less
<b>Maximum Inrush Current</b>		4A / 10ms or less
<b>Maximum Voltage Drop (On)</b>		0.4 VDC or less
<b>Over Voltage Protection</b>		Zener Diode
<b>Response Time</b>	<b>Off → On</b>	1ms or less
	<b>On → Off</b>	1ms or less (Rated load, resistive load)
<b>Common Method</b>		16 point / COM
<b>Proper Cable Size</b>		Standard cable 0.3–0.75 mm <sup>2</sup> (external diameter 2.8 mm or less)
<b>Current Consumption</b>		60mA (when all point On)
<b>External Power Supply</b>	<b>Voltage</b>	12/24 VDC ± 10% (ripple voltage 4 Vp-p or less)
	<b>Current</b>	10mA or less (24VDC connection)
<b>Operation Indicator</b>		Output On, LED On
<b>External Connection Method</b>		8 pin terminal block connector + 10 pin terminal block connector
<b>Weight</b>		54g



## XBE-TN16A - Digital I/O Module Configuration

### Direct Variables

The base rack slot number determines the Direct Variable name for the module. Each slot is automatically allocated 64 input points and 64 output points. See the chart below for the actual input Direct Variable assignments used.

For Direct Variable nomenclature explanation, see [Direct Variable User Programming Memory](#).

Part Number	PLC Memory Allocation	Actual I/O Direct Variable
<b>XBE-TN16A</b>	Input: %IX0.z.0 – %IX0.z.63 Output: %QX0.z.0 – %QX0.z.63	%QX0.z.0 – %QX0.z.15

“z” denotes the module slot (2 to 8).

Follow the Quick start video to learn how to Register and Configure any Digital I/O Module.

[Digital Module Setup](#)

## XBE-TN16A Digital Output Module Wiring

XBE-TN16A Circuit Configuration				
Circuit Configuration	Top TB Description	I/O Direct Variable	Terminal Block Image	
	00	%QX0.z.0		
	01	%QX0.z.1		
	02	%QX0.z.2		
	03	%QX0.z.3		
	04	%QX0.z.4		
	05	%QX0.z.5		
	06	%QX0.z.6		
	07	%QX0.z.7		
	Bottom TB Description	I/O Direct Variable		
	08	%QX0.z.8		
	09	%QX0.z.9		
	0A	%QX0.z.10		
	0B	%QX0.z.11		
	0C	%QX0.z.12		
	0E	%QX0.z.14		
	0F	%QX0.z.15		
(no label, 12/24V)	-			
COM	-			

Note: In the I/O Direct Variable name, z=slot number.



# XGB Series PLC Family

## Environmental Specifications, all XGB Series Modules

Item		Specification	Reference	
Ambient Operating Temperature		0–55°C (32–131°F)	-	
Storage Temperature		-25–70°C (-13–158°F)		
Ambient Operating Humidity		5–95% relative humidity (non-condensing)		
Storage Humidity		5–95% relative humidity (non-condensing)		
Vibration <sup>1</sup>	Occasional Vibration	5 ≤ f < 8.4 Hz	IEC61131-3-2	
		8.4 ≤ f < 150Hz		
	Continuous Vibration	5 ≤ f < 8.4 Hz		
		8.4 ≤ f < 150Hz		
Shocks		Peak Acceleration	147 m/s <sup>2</sup> (15G)	
		Duration	11ms	
		Pulse Wave Type	Half-sine (3 times each direction per each axis)	
Noise Resistance	Square Wave Impulse Noise		1,500VAC 900VDC	LS Electric standard
	Electrostatic Discharge		Voltage: 4kV (contact discharge)	IEC61131-3-2 IEC61000-4-2
	Radiated Electromagnetic Field Noise		80–1,000 MHz, 10 V/m	IEC61131-3-2 IEC61000-4-3
	Fast Transient / Burst Noise	Classification	Voltage	IEC61131-3-2 IEC61000-4-4
		Power Supply	2kV	
Digital/Analog Input/Output Communication Interface		1kV		
Environment		Free from corrosive gases and excessive dust	-	
Attitude		Less than 2,000m		
Pollution Degree		Less than 2 (see note 2)		
Cooling Method		Air-cooling		

1 - Vibration of 10 times each direction (X, Y, and Z)

2 - Normally only nonconductive pollution occurs. Temporary conductivity caused by condensation is to be expected.



# XGB Series PLC Family

## Available I/O Modules

XGB Series I/O Modules									
Part Number	Price	Description	Digital Input	Digital Output	Analog Input	Analog Output	Motion	Bus Coupler Compatible	Smart Link Required
<b>Digital</b>									
<a href="#"><u>XBE-DC08A</u></a>	\$59.00	LS Electric XGB discrete input module, 8-point, 24 VDC, sinking/sourcing, 1 common(s), 8 point(s) per common. Removable terminal block included.	✓					✓	
<a href="#"><u>XBE-DC16A</u></a>	\$70.00	LS Electric XGB discrete input module, 16-point, 24 VDC, sinking/sourcing, 1 common(s), 16 point(s) per common. Removable terminal blocks included.	✓					✓	
<a href="#"><u>XBE-DC16B</u></a>	\$78.00	LS Electric XGB discrete input module, 16-point, 12-24 VDC, sinking/sourcing, 1 common(s), 16 point(s) per common. Removable terminal blocks included.	✓					✓	
<a href="#"><u>XBE-DC32A</u></a>	\$97.00	LS Electric XGB discrete input module, 32-point, 24 VDC, sinking/sourcing, 1 common(s), 32 point(s) per common. Requires XTB-40H terminal block and C40HH-xxSB-XBI cable.	✓					✓	✓
<a href="#"><u>XBE-AC08A</u></a>	\$88.00	LS Electric XGB discrete input module, 8-point, 120 VAC, 2 common(s), 4 point(s) per common. Removable terminal blocks included.	✓					✓	
<a href="#"><u>XBE-RY08A</u></a>	\$80.00	LS Electric XGB relay output module, 8-point, 125 VDC/250 VAC, (8) Form A, 1 common(s), 8 point(s) per common, 2A/point, 5A/common. Removable terminal block included.		✓				✓	
<a href="#"><u>XBE-RY08B</u></a>	\$95.00	LS Electric XGB relay output module, 8-point, 125 VDC/250 VAC, (8) Form A, 8 isolated common(s), 1 point(s) per common, 2A/point. Removable terminal blocks included.		✓				✓	
<a href="#"><u>XBE-RY16A</u></a>	\$110.00	LS Electric XGB relay output module, 16-point, 125 VDC/250 VAC, (16) Form A, 2 isolated common(s), 8 point(s) per common, 2A/point, 5A/common. Removable terminal blocks included.		✓				✓	
<a href="#"><u>XBE-TN08A</u></a>	\$60.00	LS Electric XGB discrete output module, 8-point, 12-24 VDC, sinking, 1 common(s), 8 point(s) per common, 0.5A/point, 2A/common. Removable terminal blocks included.		✓				✓	
<a href="#"><u>XBE-TN16A</u></a>	\$78.00	LS Electric XGB discrete output module, 16-point, 12-24 VDC, sinking, 1 common(s), 16 point(s) per common, 0.5A/point, 2A/common. Removable terminal blocks included.		✓				✓	
<a href="#"><u>XBE-TN32A</u></a>	\$109.00	LS Electric XGB discrete output module, 32-point, 12-24 VDC, sinking, 1 common(s), 32 point(s) per common, 0.2A/point, 2A/common. Requires XTB-40H terminal block and C40HH-xxSB-XBI cable.		✓				✓	✓
<a href="#"><u>XBE-TP08A</u></a>	\$62.00	LS Electric XGB discrete output module, 8-point, 12-24 VDC, sourcing, 1 common(s), 8 point(s) per common, 0.5A/point, 2A/common. Removable terminal blocks included.		✓				✓	
<a href="#"><u>XBE-TP16A</u></a>	\$88.00	LS Electric XGB discrete output module, 16-point, 12-24 VDC, sourcing, 1 common(s), 16 point(s) per common, 0.5A/point, 2A/common. Removable terminal blocks included.		✓				✓	
<a href="#"><u>XBE-TP32A</u></a>	\$93.00	LS Electric XGB discrete output module, 32-point, 12-24 VDC, sourcing, 1 common(s), 32 point(s) per common, 0.2A/point, 2A/common. Requires XTB-40H terminal block and C40HH-xxSB-XBI cable.		✓				✓	✓
<a href="#"><u>XBE-DN32A</u></a>	\$172.00	LS Electric XGB discrete combo module, Input: 16-point, 24 VDC, sinking/sourcing, Output: 16-point, 12-24 VDC, sinking, 0.2A/point, 2A/common. Requires XTB-40H terminal block and C40HH-xxSB-XBI cable.	✓	✓				✓	✓
<a href="#"><u>XBE-DR16A</u></a>	\$97.00	LS Electric XGB discrete combo module, Input: 8-point, 24 VDC, sinking/sourcing, Output: 8-point, 125 VDC/250 VAC, relay, (8) Form A (SPST) relays, 2A/point, 5A/ common. Removable terminal blocks included.	✓	✓				✓	
<b>Motion</b>									
<a href="#"><u>XBF-PN04B</u></a>	\$350.00	LS Electric XGB 4-axis positioning module, EtherCAT Master, 1 high-speed input point(s), sinking/line driver (differential), 1-channel, differential and single-ended encoder input(s), (1) Ethernet 100Base-TX (RJ45) port(s). For use with LS Electric XEM-DxxxHx PLCs.					✓		
<a href="#"><u>XBF-PN08B</u></a>	\$395.00	LS Electric XGB 8-axis positioning module, EtherCAT Master, 1 high-speed input point(s), sinking/line driver (differential), 1-channel, differential and single-ended encoder input(s), (1) Ethernet 100Base-TX (RJ45) port(s). For use with LS Electric XEM-DxxxHx PLCs.					✓		
<a href="#"><u>XBF-HO02A</u></a>	\$176.00	LS Electric XGB counter input module, 200 kHz maximum switching frequency, 2 high-speed input point(s), 5-24 VDC, sinking, 2-channel, single-ended encoder input(s), 2 high-speed output point(s), 5-24 VDC, sinking, external 24 VDC required.					✓	✓	✓
<a href="#"><u>XBF-HD02A</u></a>	\$253.00	LS Electric XGB counter input module, 500 kHz maximum switching frequency, 2 high-speed input point(s), 5-24 VDC, sinking, 2-channel, differential encoder input(s), 2 high-speed output point(s), 5-24 VDC, sinking, external 24 VDC required.					✓	✓	✓

Note: See "Smart Link I/O System" on page tLSE-125 for the XTB-40H terminal block and cables. See "XGB PLC Replacement Terminals" on page tLSE-124 for replacement removable terminal blocks.

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