

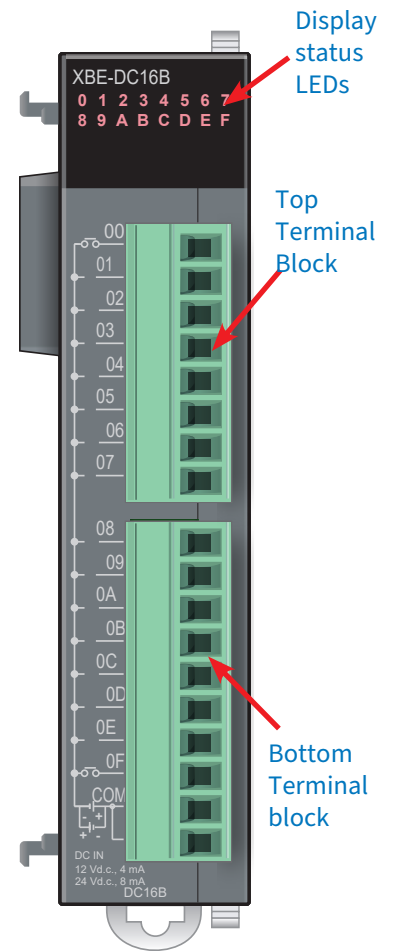


XGB Digital Modules

XBE-DC16B Digital Input Module

Part Number	Price	Classification	Description	Drawing
XBE-DC16B	\$78.00	Digital Input	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.	PDF

General Specifications	XBE-DC16B
Input Point	16 point
Insulation Method	Photo coupler insulation
Rated Input Voltage	12/24 VDC
Rated Input Current	4mA @ 12VDC / 8mA @ 24VDC
Operation Voltage Range	9.5-30 VDC (ripple rate <5%)
On Voltage/Current	9VDC or higher / 3mA or higher
Off Voltage/Current	5VDC or less / 1mA or less
Input Resistance	2.7 kΩ
Response Time	Off → On: 1/3/5/10/20/70/100 ms (set by PLC parameter) On → Off: Default: 3ms
Insulation Pressure	560VACrms / 3 Cycle (2000m altitude)
Insulation Resistance	10MΩ or more by Megohmmeter
Common Method	16 point / COM
Proper Cable Size	Stranded cable 0.3-0.75 mm ² (external diameter 2.8 mm or less)
Current Consumption	40mA (when all point On)
Operation Indicator	Input On, LED On
External Connection Method	8-pin terminal block connector + 10-pin terminal block connector
Weight	53g



XBE-DC16B - 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
XBE-DC16B	Input: %IX0.z.0 - %IX0.z.63 Output: %QX0.z.0 - %QX0.z.63	%IX0.z.0 - %IX0.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-DC16B Digital Input Module Wiring

XBE-DC16B Circuit Configuration				
Circuit Configuration	Top TB Description	I/O Direct Variable	Terminal Block Image	
	00	%IX0.z.0		
	01	%IX0.z.1		
	02	%IX0.z.2		
	03	%IX0.z.3		
	04	%IX0.z.4		
	05	%IX0.z.5		
	06	%IX0.z.6		
	07	%IX0.z.7		
	Bottom TB Description	I/O Direct Variable		
	08	%IX0.z.8		
	09	%IX0.z.9		
	0A	%IX0.z.10		
	0B	%IX0.z.11		
	0C	%IX0.z.12		
	0D	%IX0.z.13		
	0E	%IX0.z.14		
0F	%IX0.z.15			
COM	n/a			
COM	n/a			

Note: Can be wired sinking or sourcing. In the I/O Direct Variable name, z=slot number.

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 ¹	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 ² (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
Digital									
<u>XBE-DC08A</u>	\$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.	✓					✓	
<u>XBE-DC16A</u>	\$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.	✓					✓	
<u>XBE-DC16B</u>	\$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.	✓					✓	
<u>XBE-DC32A</u>	\$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.	✓					✓	✓
<u>XBE-AC08A</u>	\$88.00	LS Electric XGB discrete input module, 8-point, 120 VAC, 2 common(s), 4 point(s) per common. Removable terminal blocks included.	✓					✓	
<u>XBE-RY08A</u>	\$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.		✓				✓	
<u>XBE-RY08B</u>	\$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.		✓				✓	
<u>XBE-RY16A</u>	\$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.		✓				✓	
<u>XBE-TN08A</u>	\$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.		✓				✓	
<u>XBE-TN16A</u>	\$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.		✓				✓	
<u>XBE-TN32A</u>	\$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.		✓				✓	✓
<u>XBE-TP08A</u>	\$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.		✓				✓	
<u>XBE-TP16A</u>	\$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.		✓				✓	
<u>XBE-TP32A</u>	\$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.		✓				✓	✓
<u>XBE-DN32A</u>	\$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.	✓	✓				✓	✓
<u>XBE-DR16A</u>	\$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.	✓	✓				✓	
Motion									
<u>XBF-PN04B</u>	\$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.					✓		
<u>XBF-PN08B</u>	\$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.					✓		
<u>XBF-HO02A</u>	\$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.					✓	✓	✓
<u>XBF-HD02A</u>	\$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-131 for the XTB-40H terminal block and cables. See "XGB PLC Replacement Terminals" on page tLSE-149 for replacement removable terminal blocks.

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