LS ELECTRIC

XGB Digital Modules

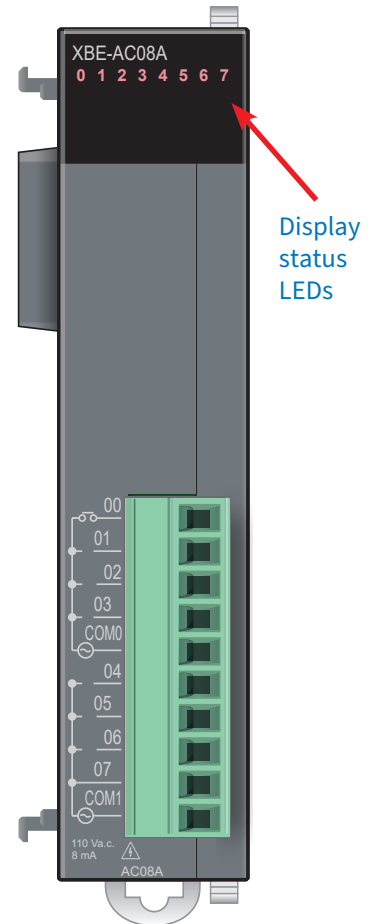## XBE-AC08A Digital Input Module

Part Number	Price	Classification	Description	Drawing
XBE-AC08A	$88.00	Digital Input	LS Electric XGB discrete input module, 8-point, 120 VAC, 2 common(s), 4 point(s) per common. Removable terminal blocks included.	PDF

General Specifications		XBE-AC08A
Input Point		8 point
Insulation Method		Photocoupler isolation
Rated Input Voltage		100-120 VAC (+10/-15%), 50/60 Hz (±Hz) (distortion rate <5%)
Rated Input Current		8mA at 60Hz, 7mA at 50Hz
Operation Voltage Range		82–132 VAC
On Voltage/Current		80VAC or higher, 5mA or higher 50/60 Hz
Off Voltage/Current		30VAC or lower, 1mA or lower 50/60 Hz
Input Resistance		12kΩ 60Hz, 15kΩ 50Hz
Response Time	Off → On	20ms or less (100VAC 50/60 Hz)
	On → Off	25ms or less (100VAC 50/60 Hz)
Insulation Pressure		560VACrms / 3 Cycle (2000m altitude)
Insulation Resistance		3000VACrms / 3 cycle (altitude 2000m), 10MΩ or more by Megohmmeter
Common Method		4 point/common
Proper Cable Size		0.05–1.5 mm^2 (30–16 AWG), Cu wire, PCB terminal block
Current Consumption		30mA (when all point On)
Operation Indicator		Input On, LED On
External Connection Method		10-point terminal block connector
Weight		70g

Display status LEDs

XBE-AC08A - 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-AC08A	Input: %IX0.z.0 – %IX0.z.63 Output: %QX0.z.0 – %QX0.z.63	%IX0.z.0 – %IX0.z.7

"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

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XBE-AC08A Digital Input Module Wiring

XBE-AC08A Circuit Configuration

Circuit Configuration	Terminal Block Description	I/O Direct Variable	Terminal Block Image
	00	%IX0.z.0	
	01	%IX0.z.1	
	02	%IX0.z.2	
	03	%IX0.z.3	
	COM0	n/a	
	04	%IX0.z.4	
	05	%IX0.z.5	
	06	%IX0.z.6	
	07	%IX0.z.7	
	COM1	n/a	

Note: 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	Frequency	$5 \leq f < 8.4\ Hz$	3.5 mm pulse width	IEC61131-3-2
			$8.4 \leq f < 150Hz$	$9.8\ m/s^2$ (1G)	
	Continuous Vibration		$5 \leq f < 8.4\ Hz$	1.75 mm pulse width	
			$8.4 \leq f < 150Hz$	$4.9\ m/s^2$ (0.5G)	
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.

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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										
XBE-DC08A	$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.	✓					✓		
XBE-DC16A	$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.	✓					✓		
XBE-DC16B	$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.	✓					✓		
XBE-DC32A	$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.	✓					✓	✓	
XBE-AC08A	$88.00	LS Electric XGB discrete input module, 8-point, 120 VAC, 2 common(s), 4 point(s) per common. Removable terminal blocks included.	✓					✓		
XBE-RY08A	$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.		✓				✓		
XBE-RY08B	$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.		✓				✓		
XBE-RY16A	$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.		✓				✓		
XBE-TN08A	$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.		✓				✓		
XBE-TN16A	$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.		✓				✓		
XBE-TN32A	$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.		✓				✓	✓	
XBE-TP08A	$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.		✓				✓		
XBE-TP16A	$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.		✓				✓		
XBE-TP32A	$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.		✓				✓	✓	
XBE-DN32A	$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.	✓	✓				✓	✓	
XBE-DR16A	$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										
XBF-PN04B	$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.					✓			
XBF-PN08B	$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.					✓			
XBF-HO02A	$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.					✓	✓	✓	
XBF-HD02A	$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.