LS ELECTRIC

XGB Digital Modules

XBE-AC08A Digital Input Module

Part Number	Price	Classification	Description	Drawing
XBE-AC08A	$;5]50:	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.

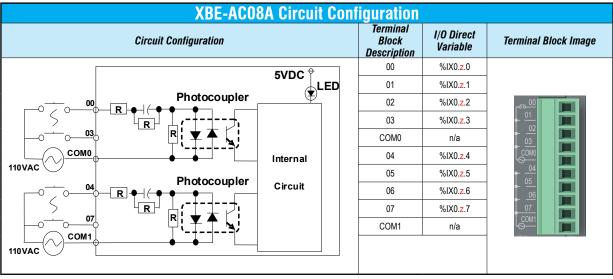| Part Number	PLC Memory Allocation	Actual I/O Direct Variable
XBE-AC08A	Input: %IX0.z.0 – %IX0.z.63 Output: %QX0.z.0 – %QX0.z.63	%IX0.z.0 – %IX0.z.7

"**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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XGB Digital Modules

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
			$8.4 \leq f < 150$Hz	9.8 m/s^2 (1G)	
	Continuous Vibration		$5 \leq f < 8.4$ Hz	1.75 mm pulse width	
			$8.4 \leq f < 150$Hz	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	$61ey:	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	$;;5]4]:	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	$;5]4?:	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	$;;05]4,:	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	$;5]50:	LS Electric XGB discrete input module, 8-point, 120 VAC, 2 common(s), 4 point(s) per common. Removable terminal blocks included.	✓					✓	
XBE-RY08A	$61eu:	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	$;05]51:	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	$;05]52:	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	$61ev:	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	$;5]54:	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	$;05]55:	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	$61ex:	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	$;5]56:	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	$;05]57:	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	$;05]53:	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	$061e#:	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	$;;05!,5:	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	$;;05!,6:	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	$;05]5e:	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	$;;05]5f:	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.