

XEL-BSSRT Programmable Logic Controller Smart I/O Ethernet Header



Key Features

- Modular I/O system
- Up to 8 I/O modules per base
- Removable terminal strips
- Compact size
- DIN Rail mountable
- Analog I/O including mA/V, thermocouple and RTD



Technical Specifications

Required Power (Steady State)	550mA @ 24VDC Class 2 Power Supply Only
Primary Power Range	19.2 - 28.8VDC
Output Power	1500mA @ 5VDC
Terminal Type	Spring-Clamp
Terminal Torque Rating	0.6Nm (5.2lbs/in)
Operating Temperature	0 - 55°C
Storage Temperature	-25°C to +70°C
Relative Humidity	5 to 95%RH (Non-condensing)
Dimensions (H x W x D)	90 x 43.5 x 72.8mm (3.54 x 1.71 x 2.87in)
Weight	114g
Noise Immunity	Per IEC 1131-2, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4

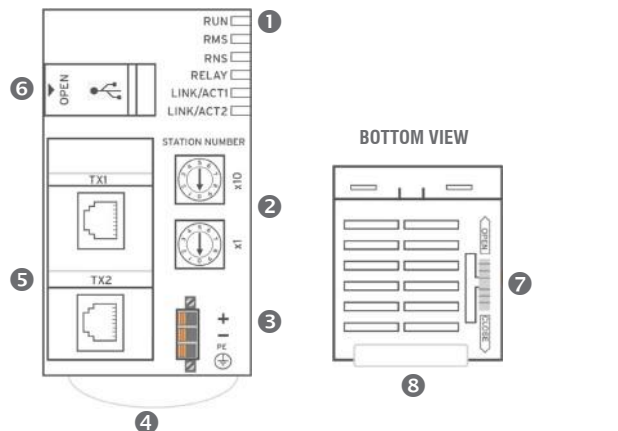
Communication Specification

Data Transmission Speed	10/100/1000Mbps
Flow Control	Full / Half Duplex
Connectors	RJ-45 (8P8C), 2 Ports (AutoMDIX)
Built-in Switch	Unmanaged Type
Protocols	Modbus TCP, Ethernet/IP, BOOTP, DHCP
Communication Cable	S-FTP over CAT5e
Inactivity Timeout	10 seconds
IP Configuration	From i3 Configurator, using Boot/p, XG5000

I/O Specification

Compatible I/O	XGB
Modules Supported (per base)	8
Digital I/O, max (per base)	256 (Inputs & Outputs)
Analog I/O, max (per base)	32 (Inputs & Outputs)
I/O Limitations (per system)	Limited only by the Register/Variable space available
Power Supplied for I/O Modules	1500mA @ 5V DC maximum

Names & Part Functions



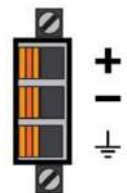
1	Status LED	6	Ethernet Ports
2	Network ID Switches (Set to 0)	7	USB Port - to connect with XG5000
3	Power Connector	8	Module Lock
4	DIN Rail Latch	9	DIN Rail Latch

Installation & Wiring

To attach an expansion input/ output module pull the two levers of up then push the product and connect it. After the connection, get down the hook to fix the connected module completely.

To detach an expansion module, push up the hook and detach it gently with two hands.

Each XEL-BSSRT base require 24 VDC power, and an appropriate earth ground connection for normal operation.



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LED Indicators

LED	State	Meaning
RUN	Off	Power Off
	Green	Master Module is Run
	Red	Master Module is Stop
	Green - Flashing	Waiting for Service - Service Standby State
RMS	Green	Normal Behaviour
	Green - Flashing	Set Up not complete
	Red	Unrecoverable error has occurred
	Red - Flashing	Recoverable error with settings, parameters, initialisation, or speed / duplex port error
RNS	Green	At least one device is connected
	Green - Flashing	Device is not connected
	Red	Duplicate IP Address or Area Codes
	Red - Flashing	Timeout with more than 1 device: Frame Error - is a Heartbeat Error occurs
RELAY	Off	Relay OFF
	Green	Relay ON
LINK/ ACT1 LINK/ ACT2	Off	Link = No, Activity = NA
	Green	1G Link = Yes, Activity = No
	Green - Flashing	1G Link = Yes, Activity = Yes
	Yellow	10 / 100M Link = Yes, Activity = No
	Yellow - Flashing	0/100M Link = Yes, Activity = Yes

Parameter Settings

Note: The first 8 bits, byte address "0", use bits 0-7. The second 8 bits, byte address "1" use bits 8-15. The second word is addressed in the same way.

All Digital I/O Modules										
Byte Address	Description	Bit								Configuration
		15 7	14 6	13 5	12 4	11 3	10 2	9 1	8 0	
0	Input Filter	-	-	-	-	Input Filter				0000:3ms 0100:20ms 0001:1ms 0101:70ms 0010:5ms 0110:100ms 0011:10ms
1	Maintaining Output Allowed	Configuration of Maintaining Output								01: Allow Other: Prohibit
2	Maintaining Output by Channels	56 to 63	48 to 55	40 to 47	32 to 39	24 to 31	16 to 23	8 to 15	0 to 7	01: Allow Other: Prohibit
3	Output Status Configuration	-	-	-	-	-	-	-	-	-

XBF-AD04A - Analog Input										
Byte Address	Description	Bit								Configuration
		15 7	14 6	13 5	12 4	11 3	10 2	9 1	8 0	
0	Channel Used	-	-	-	-	Ch 3	Ch 2	Ch 1	Ch 0	Bit off (0): Disabled Bit on (1): Enabled
1	Input Voltage / Current Range	Ch 3		Ch 2		Ch 1		Ch 0		00: 0 to 10V 01: 0 to 20mA 10: 4 to 20mA
2	Output Data Range	Ch 3		Ch 2		Ch 1		Ch 0		00: 0 to 4000 01: -2000 to 2000 10: 0 to 1000 (400 to 2000 / 0 to 2000)
3	-	-	-	-	-	-	-	-	-	-

XBF-DC04A - Analog Output										
Byte Address	Description	Bit								Configuration
		15 7	14 6	13 5	12 4	11 3	10 2	9 1	8 0	
0	Channel Used	-	-	-	-	Ch 3	Ch 2	Ch 1	Ch 0	Bit off (0): Disabled Bit on (1): Enabled
1	Output Type Configuration	Ch 3		Ch 2		Ch 1		Ch 0		00: 4 to 20mA 01: 0 to 20mA
2	Input Data Range Designation	Ch 3		Ch 2		Ch 1		Ch 0		00: 0 to 4000 01: -2000 to 2000 10: 0 to 1000 (400 to 2000 / 0 to 2000) 11: 0 to 1000
3	Output Status Configuration	Ch 3		Ch 2		Ch 1		Ch 0		00: Former Value 01: Minimum Value 10: Medium Value 11: Maximum Value

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Expansion Units

	DI	Relay Out	DO	AI	AO	RTD	TC
XBE-DC16B	16	-	-	-	-	-	-
XBE-DC32A*1	32	-	-	-	-	-	-
XBE-RY16A	-	16	-	-	-	-	-
XBE-TN16A	-	-	16	-	-	-	-
XBE-TN32A*1	-	-	32	-	-	-	-
XBE-TP16A	-	-	16	-	-	-	-
XBE-TP32A*1	-	-	32	-	-	-	-
XBE-DR16A	8	8	-	-	-	-	-
XBF-AD04A	-	-	-	4	-	-	-
XBF-AD08A	-	-	-	8	-	-	-
XBF-AH04A	-	-	-	2	2	-	-
XBF-DV04A	-	-	-	-	4	-	-
XBF-DC04A	-	-	-	-	4	-	-
XBF-RD04A	-	-	-	-	-	4	-
XBF-TC04S	-	-	-	-	-	-	4
XBF-AD04C	4 Channel Analogue Input Volt / Current 16 Bit						