

XPRT EAGLE

**ALTECH
CONTROLS**

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Rev. D

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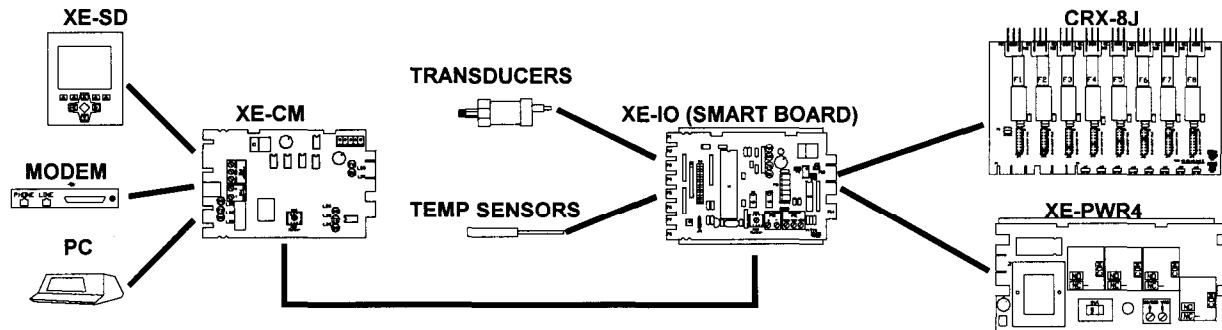
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SECTION A: GENERAL INFORMATION



GENERAL INFORMATION:

The XPRT Eagle (XE) line of controls from Altech Controls provides flexible modular solutions to all control applications. The building block components can be easily selected to allow optimal fit for applications ranging from a stand alone control application, such as a roof top unit, to a complete building control system with Ethernet and Internet connectivity. You select only what you need now with the ability to upgrade later to accommodate future application requirements.

The heart of the XPRT Eagle system is the XE-IO controller board. The XE-IO board is also known as the Smart Board because it does more than just monitor sensors and control relays, it also provides full stand-alone control. It can be supplied with various firmware "smarts" to meet specific control and monitoring needs. The other XE components are modular additions of functional capabilities to the XE-IO board.

The distributed control architecture of the XPRT Eagle products provides many benefits. Maximizing failsafe operation has been achieved by putting "smarts" in the XE-IO board. Minimizing risk of refrigerated product loss has been achieved by preventing catastrophic failures of the control system. Simplifying servicing has been achieved by allowing the serviceman to narrow his focus to a single XE-IO board; concentrate on that controller's hardware, setpoints and configuration values to resolve the problem.

XE-IO (SMART BOARD) CONTROLLERS:

55019	XE-MCC; Multiple Compressor Controller Controls two manifolds of parallel compressors
55023	XE-CDF; Multiple Condenser Fan Controller Controls fans and solenoids on a condenser
55026	XE-TD8; Temperature/Defrost Controller Controls eight refrigeration circuits.
55021	XE-EVC; Environmental Controller Controls multi-stage HVAC system with reheat
55024	XE-HVAC; General Purpose HVAC Controller Controls up to eight separate HVAC units
55022	XE-SCH, TOD Scheduler Has eight TOD schedules w/light sensor ovrd.
55020	XE-ASC; Anti-Sweat Heater Controller Controls AS heaters in up to four refig. circuits
55025	XE-SCC; Single Comp. Cnd. Unit Controller Controls two separate condensing units
55028	XE-DAQ; Data Acquisition Module Contains only standard XE-IO functions.
55029	XE-AOC; Analog Output Controller Controls up to four analog outputs.
55030	XE-UTL; Utility Meter Monitor Monitors up to eight pulse utility inputs.

MAJOR COMPONENTS:

52035	XE-CM: Serial and Ethernet Communication Manager
50240	XE-MB: 6 Slot Motherboard Card Cage and Power Supply
51001	XE-I: Intelligent LCD Display
51005	XE-SD Smart Display w/o Enclosure (Panel mount)
51006	XE-SD Smart Display w/ Enclosure
52050	XE-PLV: Power Supply; 24 VAC In; No Relays
51000	XE-PLV5: Power Supply; 24 VAC In; 5 Relays (For RTU's)
52174	XE-PWR4: Power Supply; 115/230 VAC In; 4 Relays
52173	XE-RI Relay Interface Board; 4 External Relays
52241	XE-MUX Relay Output Multiplexer (Changes 8 to 16)
52215	XE-R485 Intelligent 485 Repeater
52041	XE-TERM: Plug-On Input Terminal Board For XE-IO
52213	XE-T485: Plug-On Input Terminal Board plus a 485 port
52214	CB-7024: Four Analog Outputs via 485 communications
45125	Modem; External
55200	EagleTool Display and Configuration Software (Win98+)
55300	EagleEye Graphical User Interface Software (Win 2K+)

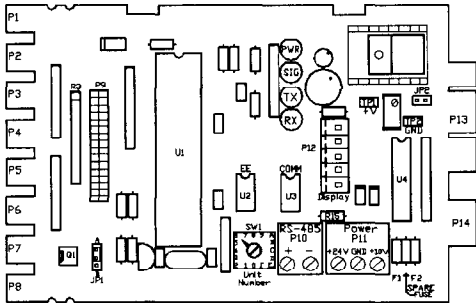
SENSORS, RELAYS AND ACCESSORIES:

41061	TM-1 Temperature Sensor, round
45019	TM-2 High Temperature Sensor, round
54005	TM-4 Temperature Sensor, square
41149	Outside Air Temperature Sensor
41150	Duct Mount Temperature Sensor
53001	Room Temperature Sensor
53002	DP2 Dewpoint Sensor
41108	Liquid Level Adaptor
45037	Refrigerant Vapor Detector
41180	Light Level Sensor
41192	LPTX4 Low Pressure Transducer (0 - 125 psi)
41193	HPTX4 High Pressure Transducer (0 - 450 psi)
41194	DPTX4 Differential Pressure Transducer (0 - 100 psi)
53004	Current Transducer (0-200 Amps)
54016	XE-DIV Divider for High Speed Pulse Inputs
54017	4-20MA Transducer Resistor, 249 Ohms
41135	CRX1 Relay Board (1 Addressable relay)
41004	CRX4 Relay Board (4 Addressable relays)
51004	CRX4J Relay Board (4 Addressable relays)
51002	CRX8J Relay Board (8 Addressable relays)
54001	Solid State Relay; 20 Amp 24 VDC Input
54022	Alarm Strobe Light
50016,17,18	Red, Green, Yellow LED's, 25 each (for CRX8J)
54002	Cable, Accessory, 3' Long
54010-2, -6, -8	Cable, Accessory, 2', 6', 8' Long
45076	Relay Edge Connector (12 Position) (Insulation Piercing)
55202	Relay Cable (100')
40193	Relay Connector Punch-Down Tool (Insulation Piercing)
54006	Cable, XE Direct Connect
54008	Cable, XE Modem Connect
56003	Cable, 485 Direct Connect (PC direct to XE-IO)
40058	24V AC Class 2 Transformer 40 VA (115/208/240 VAC)
54012	Plug-In Transformer, 12 VDC
54000-4,-9,-12,-18	Mounting Track; 4.50", 9.50", 12", 18" Long
54013	XPRT Eagle Installation and Service Manual
41110	Com and Sensor Cable (2 Pairs, Shielded 22 AWG) (100')

SECTION B: SPECIFICATIONS

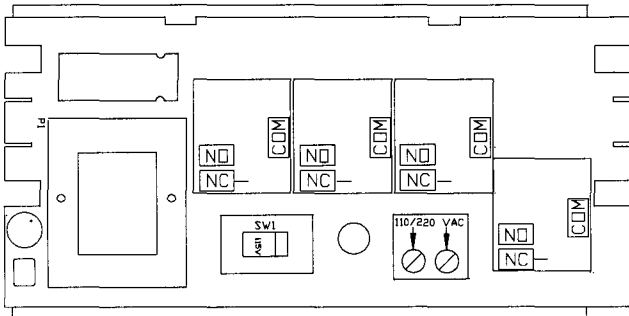
XE-IO Controller Specifications:

Ambient Temperature: 0 to 125 °F
 Ambient Humidity: Non-condensing
 Relay Voltage/Power: 22-35 VDC @ 3 VA
 Controller Voltage/Power: 10-20 VDC @ 1 VA
 Communication Ports: 1 RS-485 & 1 TTL Level
 Inputs: 8 - 10 Bit Universal Analog
 Outputs: 8 - Darlington Relay Drivers
 Sensor Logs: 8 - Each with 1000 entries
 Alarms: 8 - High/ Low Alarms
 Weight: 0.2 lb.
 Size: 5.20L x 3.25W x 1.0H



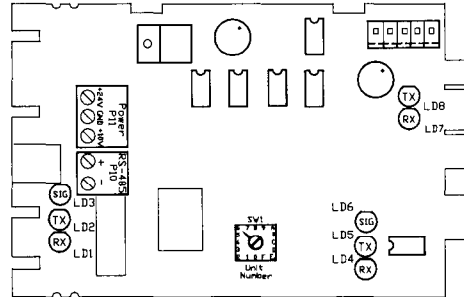
XE-PWR4 Power/Relay Board Specifications:

Ambient Temperature: 0 to 125 °F
 Ambient Humidity: Non-condensing
 Power Requirements: 10 VA @ 115/230 VAC
 Mechanical Relays: 4 Each (Outputs 1, 2 & 3)
 Contact Arrangement: 1 Form C per relay
 Contact Rating: 100 VA Pilot Duty @ 240V
 NO: 20 Amps Resistive
 NC: 10 Amps Resistive
 Expansion Port: 1 - Relay Expansion Edge Connector
 For Pass-Through of Outputs 1-8
 Weight: 1.0 lb.
 Size: 7.00L x 3.25W x 1.5H



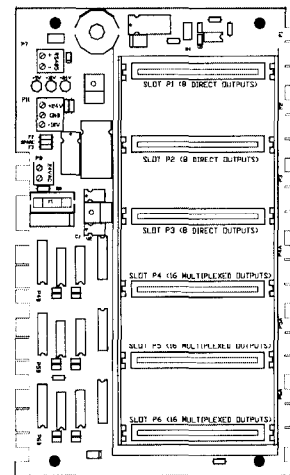
XE-CM Specifications:

Ambient Temperature: 0 to 125 °F
 Ambient Humidity: Non-condensing
 Controller Voltage/Power: 10 VDC @ 2 VA.
 Communication Ports: 1 Each: 10 Ethernet (LAN)
 1 Each: RS-232 (Modem)
 1 Each: RS-485 (XE-IO's)
 1 Each: TTL Level
 Weight: 0.2 lb.
 Size: 5.20L x 3.25W x 1.0H



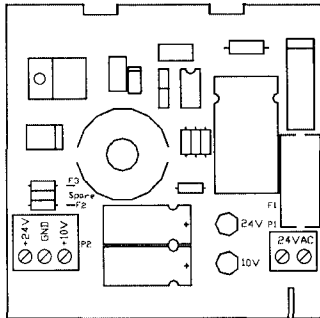
XE-MB (Motherboard) Specifications:

Operating Ambient: 0 to 125 °F
 Ambient Humidity: Non-condensing
 Ports: 6- XE card slots
 1 - RS-485 Commoning Terminal Block
 1 - 10VDC/24VDC Out Terminal Block
 1- 24 VAC Power Input Terminal Block
 Power Requirements: 35 VA @ 24 VAC
 Power Output: 2.00 Amp @ 10 VDC
 0.50 Amp @ 24 VDC
 Weight: 1.6 lb.
 Size: 6.00L x 9.80W x 6.50H
 Mounting: 4 - #8 x .750 Screws



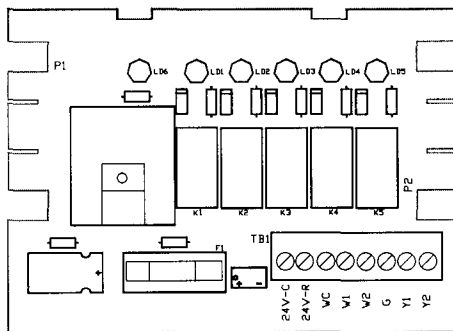
XE-PLV Low Voltage Power Supply Specifications:

Operating Ambient: 0 to 125 ° F.
Ambient Humidity: Non-condensing
Power Requirements: 35 VA @ 24 VAC
Power Output: 2.00 Amp @ 10 VDC
0.50 Amp @ 24 VDC
Weight: 0.2 lb.
Size: 3.25L x 3.25W x 1.00H



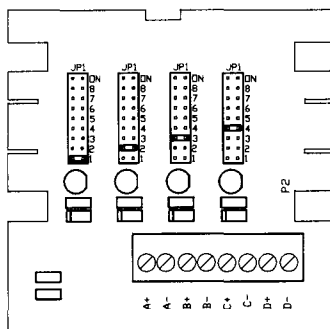
XE-PLV5 Power/Relay Board Specifications:

Operating Ambient: 0 to 125 Deg F.
Ambient Humidity: Non-condensing
Power Requirements: 5 VA @ 24 VAC
Mechanical Relays: 5 Each (Outputs 1, 2, 3, 4 & 5)
Contact Rating: 5 Amp @ 24V
Expansion Port: 1 - Relay Expansion Edge Connector
Weight: 0.2 lb.
Size: 4.50L x 3.25W x 0.75H



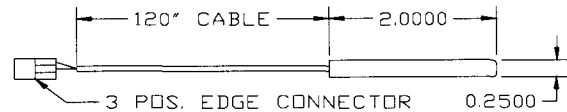
XE-RI Relay Interface Board Specification:

Operating Ambient: 0 to 125°F.
Ambient Humidity: Non-condensing
Outputs: 4 Each (Open collector)
Expansion Port: 1 - Relay Expansion Edge Connector
Weight: 0.15 lb.
Size: 3.50L x 3.25W x 0.75H



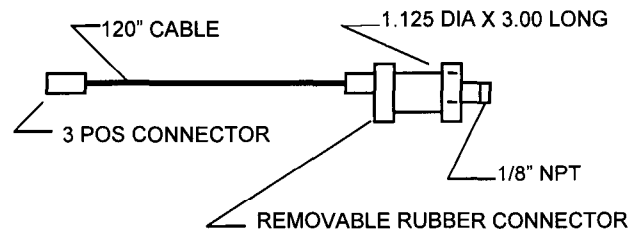
TM-1 / TM-2 Temperature Sensor Specifications:

TM-1 Temperature Range: -40 to 112° +/- 1°F
TM-2 Temperature Range: 50 to 300°F +/- 3°F
Ambient Humidity: 0 to 100 % RH
Housing: .250" Round Stainless Steel
Weight: 0.15 lb.



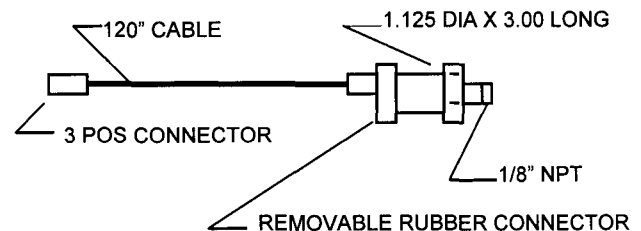
LPTX2 / LPTX4 Low Pressure Transducers:

LPTX2 Measurement Range: 0 to 100 PSIG
LPTX4 Measurement Range: 0 to 125 PSIG
Maximum Pressure: 500 PSIG
Operating Ambient: 35 to 115 Deg F.
Ambient Humidity: 0 to 95% RH
Body Material: Brass
Weight: 0.4 lb.
Leads: 22 AWG Shielded PVC (300 V)
Refrigerants: All CFC, HFC, and HCFC



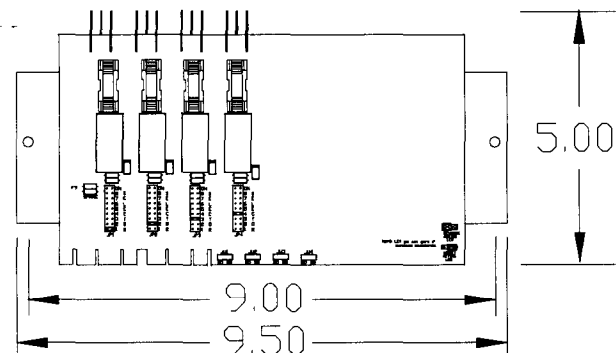
HPTX2 / HPTX4 High Pressure Transducers:

HPTX2 Measurement Range: 0 to 350 PSIG
HPTX4 Measurement Range: 0 to 450 PSIG
Maximum Pressure: 750 PSIG
Operating Ambient: 35 to 115 Deg F.
Ambient Humidity: 0 to 95% RH
Body: Brass
Weight: 0.4 lb.
Leads: 22 AWG Shielded PVC (300 V)
Refrigerants: All CFC, HFC, and HCFC Refrigerants



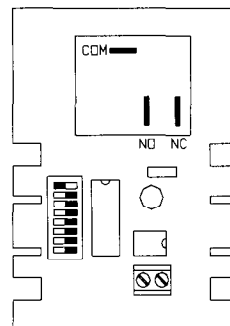
CRX4J Relay Board Specifications:

Operating Ambient: 0 to 125 ° F.
 Ambient Humidity: Non-condensing
 Power Requirements: 2 VA @ 24 VDC
 Mechanical Relays: 4 Each
 Contact Rating: 1 Amp @ 240 VAC
 Terminals: .250" Quick Disconnects
 Expansion Port: 1 - Relay Expansion Edge Connector
 Weight: 0.6 lb.



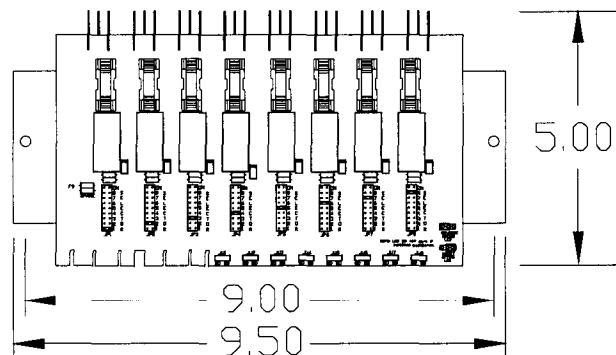
CRX1 Relay Board Specifications:

Operating Ambient: 0 to 125 ° F.
 Ambient Humidity: Non-condensing
 Power Requirements: 1 VA @ 24 VDC
 Mechanical Relays: 1 Form C
 NC Contact Rating: 10 Amp Inductive @ 240 VAC
 ½ Hp @ 240 VAC
 Terminals: .250" Quick Disconnects
 Expansion Port: 1 - Relay Expansion Edge Connector
 Size: 2.35W X 3.40H X 2.00D
 Weight: 0.2 lb.



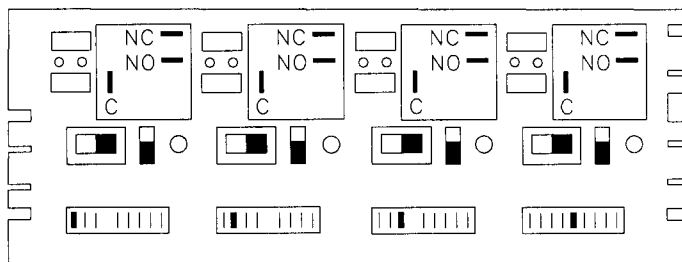
CRX8J Relay Board Specifications:

Operating Ambient: 0 to 125 ° F.
 Ambient Humidity: Non-condensing
 Power Requirements: 4 VA @ 24 VDC
 Mechanical Relays: 8 Each
 Contact Rating: 1 Amp @ 240 VAC
 Terminals: .250" Quick Disconnects
 Expansion Port: 1 - Relay Expansion Edge Connector
 Weight: 0.8 lb.



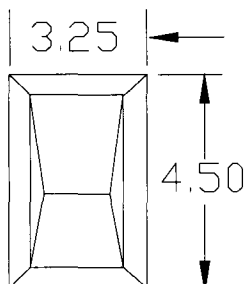
CRX4 Relay Board Specifications:

Operating Ambient: 0 to 125 ° F.
 Ambient Humidity: Non-condensing
 Power Requirements: 4 VA @ 24 VDC
 Mechanical Relays: 4 Form C
 NC Contact Rating: 10 Amp Inductive @ 240 VAC
 ½ Hp @ 240 VAC
 Terminals: .250" Quick Disconnects
 Expansion Port: 1 - Relay Expansion Edge Connector
 Size: 9.90W X 3.40H X 2.00D
 Weight: 0.2 lb.



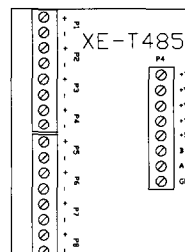
DP2 Dewpoint Sensor Specifications:

Temperature Range: -40 to 112°F
 Ambient Humidity: 0 to 99 % RH non-condensing
 Housing Material: Beige Plastic
 Weight: 0.15 lb.
 Termination: Screw Terminal Blocks
 Mounting: Fits a 2 X 4 Handy Box



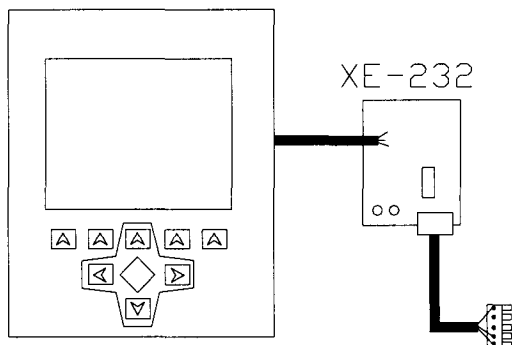
XE-TERM & XE-T485 Specifications:

Temperature Range: 0 to 125°F
 Ambient Humidity: Non-condensing
 Size: 2.35W X 3.25H X 1.10D
 Weight: 0.10 lb.



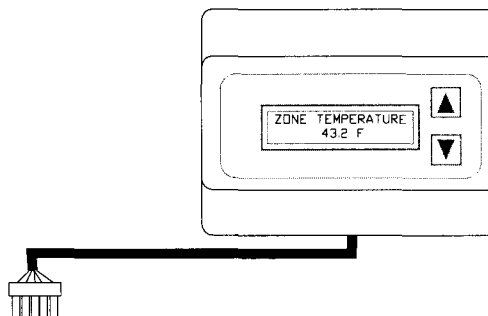
XE-SD / XE-SDE Smart Display Specifications:

Operating Ambient:	35 to 125 ° F.
Ambient Humidity:	20% to 70% Non-condensing
Power Requirements:	4 VA @ 10 VDC
Interface Board	1 – XE-R232 (Included)
Weight (XE-SD & XE-232):	1.5 lb.
XE-SD (Display only):	4.40"W X 5.65"H X 1.70"D
XE-SDE w/Enclosure:	7.0"W X 10.0"H X3.5"D NEMA4
Display Cutout:	3.90"W X 4.80"H
XE-232 Size:	2.35"W X 3.25"H X 0.80"D
Leads Display to XE-232:	10' Feet
Leads XE-232 to XE-CM:	1 Foot
-Leads 10 VDC Power:	10 Feet



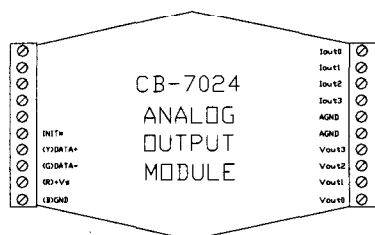
XE-I Local Display Specifications:

Temperature Range:	0 to 125°F
Ambient Humidity:	Non-condensing
Housing Material:	Black Plastic
Display:	2 X 16 Characters; w/Backlight
Weight:	0.75 lb.
Mounting:	Magnetic
Leads:	10 Feet



CB7024 Analog Output Module Specifications:

Operating Ambient:	0 to 125 ° F.
Ambient Humidity:	Non-condensing
Power Requirements:	2 VA @ 24 VDC
Analog Outputs:	Four 0 – 10 VDC
Size:	5.50"W X 2.90"H X 1.20"D
Weight:	0.25 lb.



XE-MUX Output Relay Multiplexer Specifications:

Operating Ambient:	0 to 125 ° F.
Ambient Humidity:	Non-condensing
Power Requirements:	2 VA @ 24 VDC
Size:	2.00"W X 3.25"H X 0.50"D
Mounting:	3.25" Snap Track
Weight:	0.10 lb.

