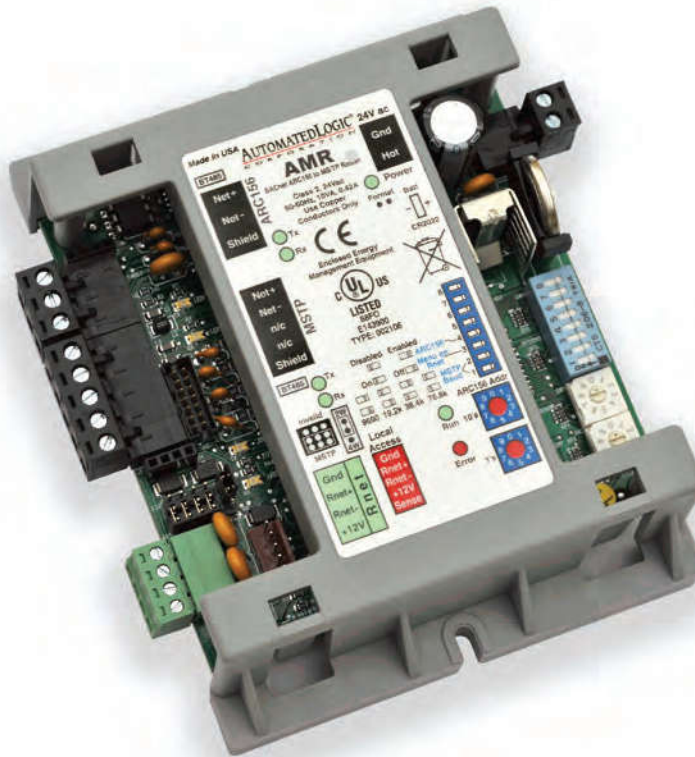


AMR

BACnet MS/TP Connectivity Made Simple!



Automated Logic's AMR makes routing between ARC156 to BACnet MS/TP networks easy! The AMR is compact, rugged and cost effective, enabling faster ARC156 BACnet networks to be routed to slower MS/TP devices or networks.

Key Features and Benefits

- Serves as an economical field router to a single piece of equipment/device using BACnet MS/TP or a network of devices that communicate using BACnet MS/TP. (Note: Recommended maximum is 32 BACnet MS/TP devices.)
- Rotary address switches for setting the AMR's network address.
- Rnet port for local communication and driver download.
- Battery-backed real-time clock + RAM ensures continuous operation during power failures and communications failures.
- Flash memory allows for easy field upgrades over network.
- 16-bit microprocessor combined with ARCNET 156 kbps communications offers ample horsepower and speed for equipment integration requirements.

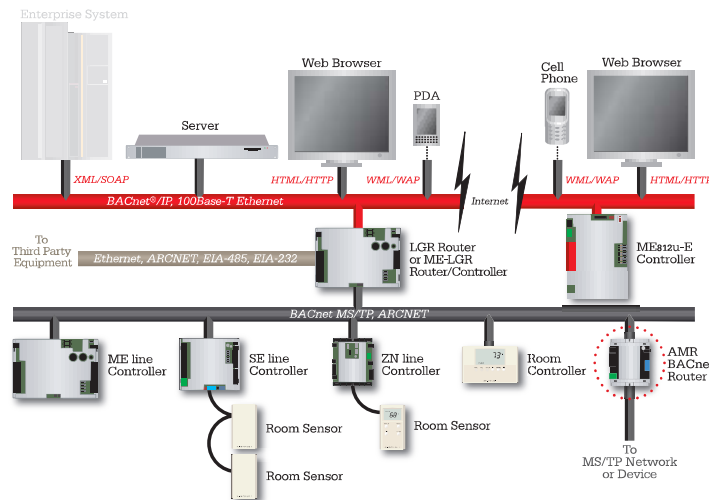
AUTOMATEDLOGIC®
CORPORATION

1150 Roberts Boulevard
Kennesaw, Georgia 30144
770/429-3000
Fax 770/429-3001
www.automatedlogic.com

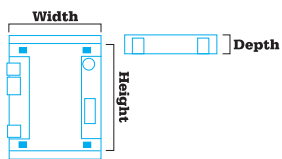
CSAMR

AMR

Specifications



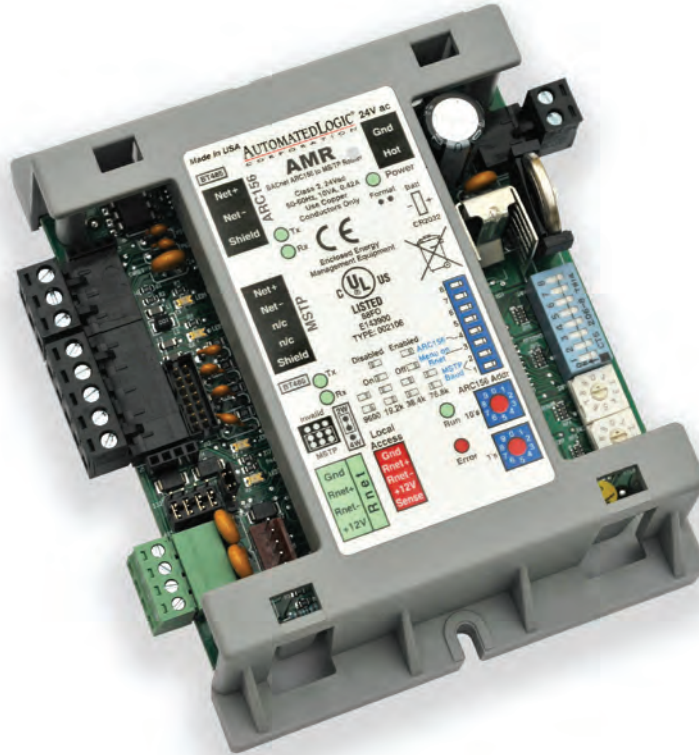
BACnet Support:	Conforms to the Advanced Application Controller (B-AAC) Standard Device Profile as defined in ANSI/ASHRAE Standard 135-2004 (BACnet) Annex L.
Communication:	The following ports are available: - ARC156 port for communication with the ARC156 network. - MSTP port for communication with the MS/TP network on EIA-485 (2-wire). The AMR acts as a master device on the MS/TP network. - Local Access port for system start-up and troubleshooting. - Rnet port not used.
Microprocessor:	High speed 16-bit microprocessor with ARCNET communication co-processor.
Memory:	1 MB non-volatile battery-backed RAM, 4 MB Flash memory, 16-bit memory bus.
Real-time Clock:	Battery-backed real-time clock keeps track of time in event of power failure.
Battery:	10-year Lithium CR2032 battery provides a minimum of 10,000 hours of data retention during power outages.
Status Indicators:	LED's indicate status of communications, running, errors, and power.
Protection:	Incoming power and network connections are protected by non-replaceable internal solid-state polyswitches that reset themselves when the condition that causes a fault returns to normal. The power and network connections are also protected against voltage transient and surge events.
BT485 Connector:	A BT485 is attached to a control module at the beginning and end of a network segment to add bias and to terminate a network segment.
Listings:	UL-916 (PAZX), cUL-916 (PAZX7), FCC Part 15-Subpart B-Class A, CE EN50082-1997.
Environmental Operating Range:	0 to 130°F (-17.8 to 54.4°C), 10–90% relative humidity, non-condensing. NOTE: Control module must be installed within the building.
Power Requirements:	24 Vac $\pm$ 10%, 50–60 Hz, 10 VA, single Class 2 source only 20 VA or less. 26 Vdc $\pm$ 10%, 5W.
Physical:	Rugged GE C2950 Cyclopy plastic.
Weight:	0.4 lbs (0.2 kg).
Dimensions:	4" (10.2cm) width by 5" (12.7cm) height.



Mounting:	5 9/16" (14.1 cm) between mounting slot centerlines. Recommended panel depth: 1.75" (5.1 cm)
-----------	--

AMR

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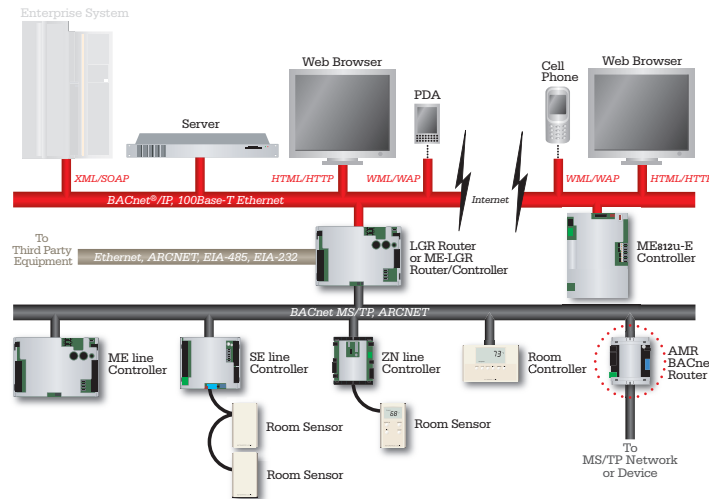
AUTOMATED LOGIC[®] CORPORATION

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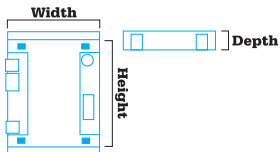
CSAMR

AMR

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-----------	--

Drawing Designation: Example User Interface Screenshots

Webster University - Interdisciplinary Science Building Lighting Controls

470 E. Lockwood Ave.
Webster Groves, MO 63119

As Prepared By:



Automatic Controls Equipment Systems, Inc.

11088 Gravois Industrial Court
St. Louis, MO, 63128
T: (314) 722-2727 F: (314) 722-2728

PROJECT TEAM

Client Name:	Webster University
Owner:	Webster University
Architect:	N/A
MEP Engineer:	N/A
Consulting Engineer:	N/A
Construction Manager:	N/A
General Contractor:	N/A
Mechanical Contractor:	N/A
ALC Design Engineer:	Paul Lane
ALC Project Manager:	Mike Manzelli
Project Number:	WU-02-16
Drawing Date:	7/28/2016

St. Louis, MO, 63128

T: (314) 722-2727 F: (314) 722-2728

Project Name: Webster University - Interdisciplinary Science Building Lighting Controls

Project Number: WU-02-16

Drawing Designation: Submittal

Drawing Date: 7/28/2016

<u>Page</u>	<u>Manufacturer</u>	<u>Part Number</u>	<u>Part Description</u>
2	Acuity Controls	CM-PDT-9-R	Ceiling Mount Occupancy Sensor, Dual Technology (PIR/Microphonics), Small Motion 360°, Low Voltage
5	Acuity Controls	WV-16-R	Wide View Occupancy Sensor, PIR, w/ Low Voltage Relay
7	Acuity Controls	WV-PDT-16-R	Dual Technology Wide View Occupancy Sensor w/ Low Voltage Relay
9	Automated Logic	AMR	ARCnet to MS/TP Router
11	Blue Ridge Technologies	CTS1CH-WH	Capacitive Touch Station, 1 Channel, White (wallplate not included)
11	Blue Ridge Technologies	CTS1RL-WH	Capacitive Touch Station, 1 Raise/Lower, White (wallplate not included)
11	Blue Ridge Technologies	CTS3PR-WH	Capacitive Touch Station, 3 Preset, White (wallplate not included)
11	Blue Ridge Technologies	CTS2RL-WH	Capacitive Touch Station, 2 Raise/Lower, White (wallplate not included)
13	Blue Ridge Technologies	LS24O	Light Level Sensor, 10VDC, Indoor, 0-50FC, Recessed Ceiling Mount
15	Blue Ridge Technologies	RPDS08-08-0-XO-10	Relay Panel Dimming Standard, 8 Relay Capacity
15	Blue Ridge Technologies	RPDS08-08-0-00-10	Relay Panel Dimming Standard, 8 Relay Capacity
17	Blue Ridge Technologies	RPDS16-16-4-X1-20	Relay Panel Dimming Standard, 16 Relay Capacity
19	Blue Ridge Technologies	SCDS-X1	Satellite, Dimming Standard, UL924, 120/277
21	Blue Ridge Technologies	SCDS-00	Satellite, Dimming Standard, 120/277
21	Blue Ridge Technologies	SCSS-00	Satellite, Switching Standard, 120/277
23	Blue Ridge Technologies	ZCDS-X1-00	Zone Controller, Dimming Standard, UL924, 120/277
25	Blue Ridge Technologies	ZCDS-00-00	Zone Controller, Dimming Standard, 120/277
27	IR-Tec	BPD-500-SR-L	IR-TEC Light Level Sensor, 10VDC Linear Photodiode, Indoor, 0-50FC, Recessed Ceiling Mount

Shop Drawing Submittal Review

Transmitted To: Cannon Design

Date: August 9, 2016

Attention: stl-cac@cannondesign.com

Contact Person / WTA Field Inspector:
Patrick Garner

Project Name: Webster University-**ISB**

Reviewed by: Mark de la Fuente

Project No. WT 14127.01

☐

UPS

☐

Courier

☒

Email

Copies	No.	Description
1 PDF	265700E01A	(Submittal No.'s) (R&B CxSRC)
		(Cannon #2605700-002 REV001) – (Paric #15051-) – (WES #607)
		• Lighting Controls Product Data REV1

***Remarks: Please see PAGE 2 for remarks.**

c: **Kelvin Patel**
Kpatel@cannondesign.com

☐ Furnish as Submitted

☒ ***Furnish as Noted**

☐ Rejected

☐ Revise & Resubmit

☐ Not Reviewed

☐

Corrections or comments made on shop drawings during this review do not relieve contractor from compliance with requirements of drawings and specifications. This check is only for review of general conformance with the design concept of project and general compliance with information given in contract documents. Contractor is responsible for: confirming and correlating all quantities and dimensions; selecting fabrication processes and techniques of construction; coordinating his work with that of all other trades; and performing his work in a safe and satisfactory manner.

Shop Drawing Submittal Review

***Submittal Review Comments**

1. Configure lighting control system to energize emergency lights upon loss of normal power.
2. Per E0601, contractor shall coordinate a meeting between design team, owner, and lighting control system start up technician, to review sequence of operations. The intent of this meeting is to identify any programming open items that need to be resolved. And to answer any questions the technician might have regarding design intent.
3. Provide two extra "1RL" wall stations (one on stage and one in control 160B) to serve stage lighting in combination with "2RL" stations, as intended with "3RL" station callout shown on plans.
4. Level 01: Materials list calls for 2 light level sensors, but it is unclear where these are intended to go.
5. Area 2B: Missing light level sensor in Comp Lab 231.
6. Area 3B: Missing Office 311 and Commons 339.
7. Area 4B: Missing "4i" fixtures in main stairwell. Configure these fixtures to operate with "1m" fixtures in main stairwell.
8. Sequence of operations: Coordinate dim-warn settings with engineer.

From: STL-CAC <STL-CAC@CANNONDESIGN.COM>
To: 'Patrick Garner' <pgarner@wmtao.com>, WTASHOP <wtashop@wmtao.com>
CC: "Patel, Kelvin" <kpatel@CANNONDESIGN.COM>
Date: 8/2/2016 11:02 AM
Subject: Webster ISB - 26 5700-002 ~~REV002~~ **REV001**
Attachments: 265700-002 Lighting Controls Product Data REV1.pdf

Attached for review.

Melissa Pirtle
Construction Admin
[cid:image001.png@01D1ECAD.889AF8D0]
1100 Clark Ave
St. Louis, Missouri 63102
T 314.425.8797 * M
cannondesign.com



77 Westport Plaza
Suite 250
St. Louis, MO 63146

TRANSMITTAL

No. 15051-0163

Paric Corporation

PROJECT: 15051-Webster University Interdisciplinary Science Building

DATE: 08/01/2016

TO: Cannon Design
1100 Clark Ave
St Louis MO 63102

RE: Lighting Controls Product Data REV1

ATTN: Kelvin Patel

JOB: 15051

WE ARE SENDING:	SUBMITTED FOR:	ACTION TAKEN:
☐ Shop Drawings	☐ Approval	☐ Approved as Submitted
☐ Letter	☐ Your Use	☐ Approved as Noted
☐ Prints	☐ As Requested	☐ Returned After Loan
☐ Change Order	☐ Review and Comment	☐ Resubmit
☐ Plans		☐ Submit
☐ Samples	SENT VIA:	☐ Returned
☐ Specifications	☐ Attached	☐ Returned for Corrections
☒ Other: Product Data	☐ Separate Cover Via:	☐ Due Date:

<i>Item</i>	<i>Package</i>	<i>Code</i>	<i>Rev.</i>	<i>Copies</i>	<i>Date</i>	<i>Description</i>	<i>Status</i>
Submittal		265700-002	2		08/01/2016	Lighting Controls Product Data REV1	Submitted

NOTES:

CC:

Signed: _____
Devin Gates

Transmittal

To Paric Corporation

Date 7/29/16

Job Number 11317

Job Name Webster Univ. ISB Building

Attention Devin Gates

Transmittal Number 11317-012

We are sending you:

☒ Attached

☐ Under separate cover, the following:

☐ Preliminary Drawings

☐ Samples

☐ Construction Drawings

☐ Copy of Letter

☐ Specifications

☐ Other _____

Quantity	Drawing #	Date/Revision	Description
1			Submittal for Lighting Controls (Hardware &
			Wiring Diagram) - Spec Section 26 57 00

These are transmitted as checked:

☒ For Your Review & Comment

☐ Approved As Noted

☒ For Approval

☐ Returned For Corrections

☐ For Your File

☐ Approved As Submitted

☐ As Requested

☐

Copy:

Transmittal

Enclosure

Rick Branstetter

Signed: Rick Branstetter, Project Manager