

1.0 Reference and Address			
Report Number	105726896CRT-002	Original Issued: 3-Nov-2025	Revised: None
Standard(s)	Explosive Atmospheres – Part 0: Equipment – General Requirements [UL 60079-0:2019 Ed.7+R:19Jul2024] Standard for Safety Explosive Atmospheres - Part 7: Equipment Protection by Increased Safety "e" [UL 60079-7:2017 Ed.5+R:03Jun2021] Explosive Atmospheres - Part 31: Equipment Dust Ignition Protection by Enclosure "t" [UL 60079-31:2015 Ed.2+R:13Aug2020] Explosive Atmospheres - Part 0: Equipment - General Requirements (R2024) [CSA C22.2#60079-0:2019 Ed.4] Explosive Atmospheres - Part 7: Equipment Protection by Increased Safety "e" (R2021) [CSA C22.2#60079-7:2016 Ed.2+A1] Explosive Atmospheres - Part 31: Equipment Dust Ignition Protection By Enclosure "T" [CSA C22.2#60079-31:2015 Ed.2] Electrical Equipment for Measurement, Control, and Laboratory Use; Part 1: General Requirements [UL 61010-1:2012 Ed.3+R:06Jun2023] Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use Part 1: General Requirements (R2022) [CSA C22.2#61010-1-12:2012 Ed.3+U1;U2;A1] Industrial Control Panels>Valid without technical revision: 26Jun2027< [UL 508A:2018 Ed.3+R:21Jul2022] Industrial Control Panels and Assemblies [CSA C22.2#286:2023 Ed.3] Enclosures for Electrical Equipment, Non-Environmental Considerations [UL 50:2024 Ed.14] Enclosures for Electrical Equipment, Environmental Considerations [UL 50E:2020 Ed.3+R:30Apr2024] Enclosures For Electrical Equipment, Non-Environmental Considerations [CSA C22.2#94.1:2024 Ed.3] Enclosures for Electrical Equipment, Environmental Considerations [CSA C22.2#94.2:2020 Ed.3+U1]		
Applicant	Akron Brass Company	Manufacturer 1	Akron Brass Company
Address	343 Venture Blvd. PO Box 86 Wooster, OH 44691-4681	Address	343 Venture Blvd. PO Box 86 Wooster, OH 44691-4681
Country	USA	Country	USA
Contact	Adam Uhler	Contact	Randy Tharp
Phone	330 287 7114	Phone	330 287 7030
FAX	N/A	FAX	N/A
Email	auhler@idexcorp.com	Email	rtharp@idexcorp.com

2.0 Product Description	
Product	Fire Monitor Control Panel for use in: Class I, Division 2, Groups B, C, & D T5 Class I, Zone 2, Ex ec IIB+H2 T5 Gc Class II, Division 2, Groups E, F, & G T5 Class II, Zone 22 Ex tc IIIC T5 Dc (-40°C ≤ Ta ≤ 60°C)
Brand name	NA
Description	The product covered by this report is an industrial, permanently installed, fire monitor control panel intended for use in hazardous locations.
Models	Monitor Interface Control Panel (MICP)
Model Similarity	NA
Ratings	100-240VAC, 50/60Hz, 300VA, 5kA SCCR, Type 4X.
Other Ratings	IP66.

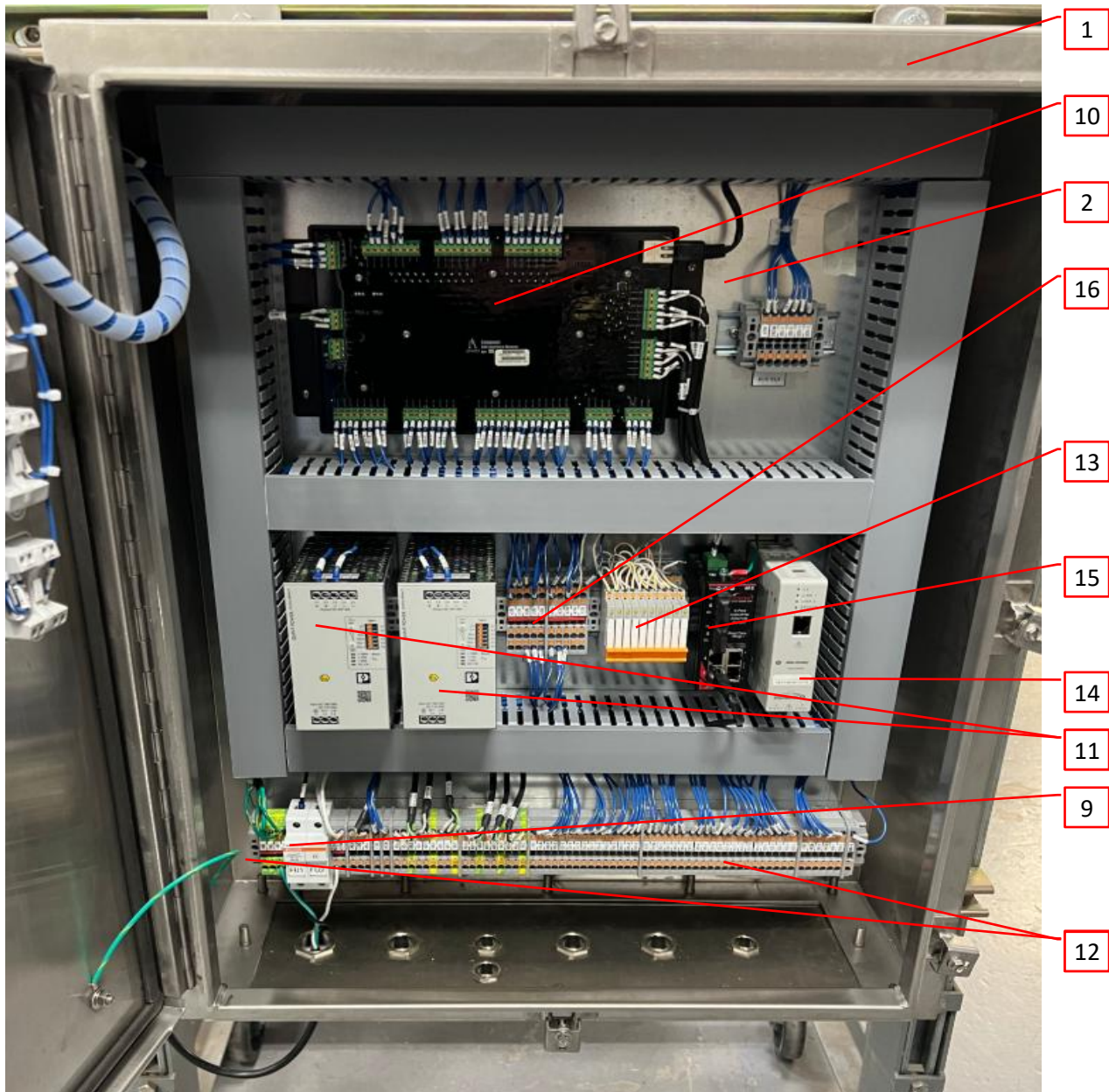
3.0 Product Photographs

Photo 1 - External View of MICP



3.0 Product Photographs

Photo 2 - Internal View of MICP



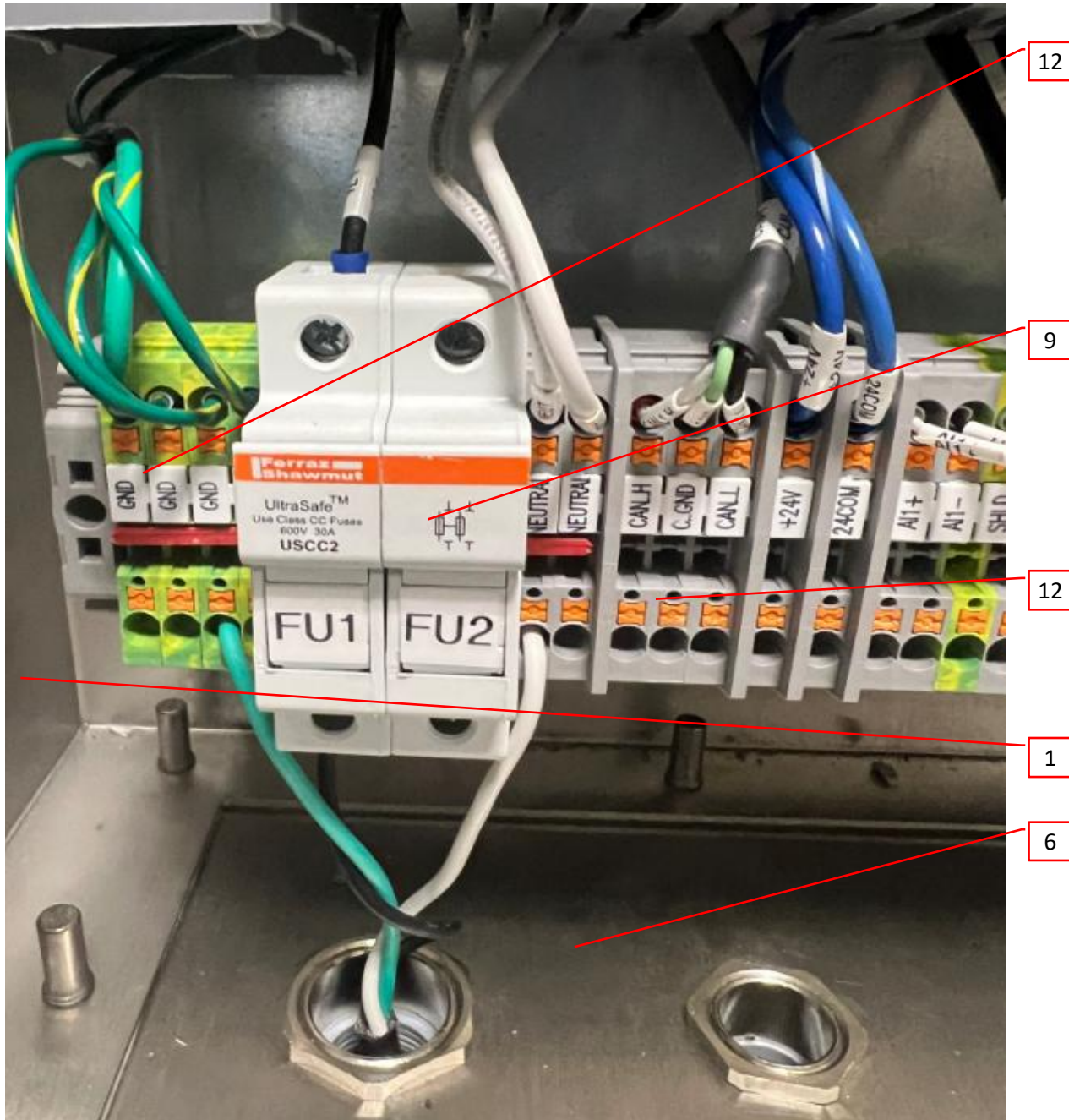
3.0 Product Photographs

Photo 3 - Internal View of MICP Door



3.0 Product Photographs

Photo 4 - Internal View of MICP, Mains connection



4.0 Critical Components						
Photo #	Item no. ¹	Name	Manufacturer/ trademark ²	Type / model ²	Technical data and securement means	Mark(s) of conformity ³
1, 2, 3, 4	1	Control Panel Enclosure	ADALET	TN4X6-242408B	24" x 24" x 8" Increased Safety Enclosure. Type 4X.	cURus
				TN4X6-302408B	30" x 24" x 8" Increased Safety Enclosure. Type 4X.	cURus
2	2	Back Panel	HOFFMAN	A-30P24G	Galvanized sub-panel.	NR
2	3	Push buttons (Not Shown)	Allen Bradley	800H series	Rated Type 4/4X/13.	CSA, UL
			Bartec	07-336 series	Rated: Type 4X. Class I, Zone 1, Aex db eb IIC, Gb. Class I, Div 2, Groups A, B, C, D. Ex db eb IIC Gb.	cURus
1	4	Pilot lamps	Allen Bradley	800H series	Rated Type 4/4X/13.	CSA, UL
			Bartec	07-335 series	Rated: Type 4X. Class I, Zone 1, Aex db eb IIC, Gb. Class I, Div 2, Groups A, B, C, D. Ex db eb IIC Gb.	cURus
1, 3	5	Operators (switches)	Allen Bradley	800H series	Rated Type 4/4X/13.	CSA, UL
			Bartec	07-332 series	Rated: Type 4X. Class I, Zone 1, Aex db eb IIC, Gb. Class I, Div 2, Groups A, B, C, D. Ex db eb IIC Gb.	cURus
4	6	Cable Gland Plate	ADALET	Various	Supplied with ADALET enclosures, utilizes 10x 1/4"-20 x 3/4" cap screws for securement and torqued at 78.8 in*lbs.	NR
4	7	Fuse (F1) (Not shown)	Bussmann	FNQ-R-2	Rated 600VAC, Class CC, 2A, mounted on DIN rail.	CSA, UL
				FNQ-R-1	Rated 600VAC, Class CC, 1A, mounted on DIN rail.	
4	8	Fuse (F2) (Not shown)	Bussmann	FNQ-R-1	Rated 600VAC, Class CC, 1A, mounted on DIN rail.	CSA, UL
2, 4	9	Fuse Block	Mersen	USCC1	Single pole, non-illuminated, rated: 600V, 50/60Hz, 30A.	CSA, UL
				USCC2	2-pole, non-illuminated, rated: 600V, 50/60Hz, 30A.	CSA, UL
2	10	CAN Interface Board	Akron Brass	60670001	6 Layer PCB, FR-4 material, UL94 V-0, 0.062" +/- 10% thickness when finished.	NR
2	11	DC Power Supply	Phoenix Contact	QUINT-PS/1AC/24DC/20 (2904617)	Power supply rated 100-240VAC input, 24Vdc, 20A output.	UL, cURus
2, 4	12	Terminal Block	Phoenix Contact	3211757	Rated 32A, 800V push in connection, 24-10AWG, grey in color.	cURus
				3211797	Rated 38A, 800V, push in connection, 24-10AWG, grey in color.	cURus
				3211766	Rated 38A, DIN Ground push in connection, 24-10AWG, green/yellow in color.	cURus

4.0 Critical Components						
Photo #	Item no. ¹	Name	Manufacturer/ trademark ²	Type / model ²	Technical data and securement means	Mark(s) of conformity ³
~	13	Electro-mechanical Relays	Phoenix Contact	2909528	Rated 250V, Contact current rating 6A, 24VDC coil voltage, 24V control voltage, 300V contact rating.	cULus
~	14	Media Converter 1	Allen Bradley	1783-ETAP2F	Unmanaged ethernet switch 1-copper, 2-fiber.	cULus
~	15	Media Converter 2	RED LION	SLX-3ES-2SC	Unmanaged ethernet switch 1-copper, 2-fiber.	UL, CSA
				SLX-6RS-4SC-D1	Unmanaged ethernet ring switch 4-copper, 2-fiber.	UL, CSA
~	16	Fused Terminal Block	Phoenix Contact	3211861	Fuse modular terminal block, PT 4 HESI (5x20), Push in connector, rated 500V, 6.3A.	cURus
~	17	Fuse for fused terminal block (Not shown)	AUTOMATIONDIRECT	GMA1	Rated 250V, 1A. 5x20mm glass fuse.	cULus
~	18	Nameplate (Not shown)	Akron Brass	MICP LABEL	316L SS, 0.01 - 0.02" in thickness. Secured by 3M 9471LE adhesive backing.	NR
NOTES: 1) Not all item numbers are indicated (called out) in the photos, as their location is obvious. 2) "Various" means any type, from any manufacturer that complies with the "Technical data and securement means" and meets the "Mark(s) of conformity" can be used. 3) Indicates specific marks to be verified, which assures the agreed level of surveillance for the component. "NR" - indicates Unlisted and only visual examination is necessary. "See 5.0" indicates Unlisted components or assemblies to be evaluated periodically refer to section 5.0 for details.						

5.0 Critical Unlisted CEC Components

No Unlisted CEC components are used in this report.

6.0 Critical Features
<u>Recognized Component</u> - A component part, which has been previously evaluated by an accredited certification body with restrictions and must be evaluated as part of the basic product considering the restrictions as specified by the Conditions of Acceptability.
<u>Listed Component</u> - A component part, which has been previously Listed or Certified by an accredited Certification Organization with no restrictions and is used in the intended application within its ratings.
<u>Unlisted Component</u> - A part that has not been previously evaluated to the appropriate designated component standard. It may also be a Listed or Recognized component that is being used outside of its evaluated Listing or component recognition.
<u>Critical Features/Components</u> - An essential part, material, subassembly, system, software, or accessory of a product that has a direct bearing on the product's conformance to applicable requirements of the product standard.
<u>Construction Details</u> - For specific construction details, reference should be made to the photographs and descriptions. All dimensions are approximate unless specified as exact or within a tolerance. In addition to the specific construction details described in this Report, the following general requirements also apply.
1. <u>Spacing</u> - In primary circuits, 1.6 mm minimum spacing are maintained through air and over surfaces of insulating material between current-carrying parts of opposite polarity and 1.6 mm minimum between such current-carrying parts and dead-metal parts or low voltage isolated circuits.
2. <u>Mechanical Assembly</u> - Components such as switches, fuseholders, connectors, wiring terminals and display lamps are mounted and prevented from shifting or rotating by the use of lockwashers, starwashers, or other mounting format that prevents turning of the component.
3. <u>Corrosion Protection</u> - All ferrous metal parts are protected against corrosion by painting, plating or the equivalent.
4. <u>Accessibility of Live Parts</u> - All uninsulated live parts in primary circuitry are housed within a metal enclosure constructed with no openings other than those specifically described in Sections 4 and 5.
5. <u>Internal Wiring</u> - Internal wiring is routed away from sharp or moving parts. Internal wiring leads terminating in soldered connections are made mechanically secure prior to soldering. Recognized Component separable (quick disconnect) connectors of the positive detent type, closed loop connectors, or other types specifically described in the text of this report are also acceptable as internal wiring terminals. At points where internal wiring passes through metal walls or partitions, the wiring insulation is protected against abrasion or damage by plastic bushings or grommets. All wiring is minimum 18 AWG, with a minimum rating of 300V, 80°C.
6. <u>Schematics</u> - Refer to Illustration No(s). 1 for schematics requiring verification during Field Representative Inspection Audits.
7. <u>Markings</u> - The product is marked on a labeling system as described in item no. 18 of Section 4.0 as follows: applicant's name or brand name, model number, date of manufacturer, electrical ratings, Hazardous Locations Rating String.
8. <u>Cautionary Markings</u> - The following are required: DO NOT OPEN, MAINTAIN, OR SERVICE IN AN AREA WHERE AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT. The following markings in French are required: NE PAS OUVRIR, ENTRETENIR, OU UTILISER DANS UNE ZONE OÙ UNE ATMOSPHÈRE EXPLOSIVE PEUT ÊTRE PRÉSENTE.
9. <u>Installation, Operating and Safety Instructions</u> - Instructions for installation and use of this product are provided by the manufacturer. Refer to Illustration No(s). 1 for details.

7.0 Illustrations

Illustration 1 - Controlled Drawing Table (Verify Revision and Date upon inspection)

Title:	Drawing No.:	Rev:	Dated:	To be verified:
MICP Installation, Operation, & Maintenance Manual	3688 Manual	3	10/21/2025	Yes
Monitor Interface Control Panel Assembly	D91438	2	10/17/2025	Yes
Monitor Interface Control Panel Schematic	D91439	1	10/17/2025	Yes
Monitor Interface Control Panel Assembly	D91442	2	10/17/2025	Yes
Monitor Interface Control Panel Schematics	D91443	1	10/17/2025	Yes

7.0 Illustrations

Illustration 2 - Instruction Pages



MICP™ INSTALLATION, OPERATION, & MAINTAINENCE MANUAL

Monitor Interface Control Panel

Rev.3

October 21, 2025

Akron Brass Co.
343 Venture Blvd.
Wooster, Ohio 44691

7.0 Illustrations

Illustration 3 - Instruction Pages (Cont.)

II. General

A. Symbols used in this manual.



- Indicates a hazardous situation which, if not avoided, WILL result in death or serious injury.



- Indicates a hazardous situation which, if not avoided, COULD result in death or serious injury.



- Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.



- Addresses practices not related to personal injury.

B. Product Safety and Warnings



Important:

Before installing and operating this equipment, read & study this manual thoroughly. Proper installation is essential to safe operation. In addition, the following points should be adhered to ensure the safety of equipment and personnel.



- It is the responsibility of the user to make the required penetrations into the Monitor Interface Control Panel (MICP) for the mains supply, cabling for monitor motors, and interface to any operator controls. The installer must select at a minimum IP66 ATEX certified Ex ec IIB+H2 cable glands (Europe) or NEMA 4 cable gland fittings and follow the manufacturer's installation instructions to ensure a watertight penetration.
- It is the responsibility of the user to ensure that cable glands and/or conduit fittings are selected and installed to maintain the applicable hazardous area rating.
- (Europe only) It is the responsibility of the user to ensure that cable glands and/or conduit fittings are selected and installed to maintain a 360° electrical bond between the cable outer screen and the enclosure to maintain EMC immunity.
- The Conquest G2 system is not to be aimed at or operated in the direction of personnel.
- Do not stand or place any part of your body in front of the nozzle when operating. Do not adjust the pattern sleeve manually when flowing water.

7.0 Illustrations

Illustration 4 - Instruction Pages (Cont.)

The illustration shows a vertical stack of 16 safety labels on the left and a list of 20 safety instructions on the right. The labels are as follows:

- 1. **WARNING** (Orange background, black text)
- 2. **WARNING** (Orange background, black text)
- 3. **WARNING** (Orange background, black text)
- 4. **WARNING** (Orange background, black text)
- 5. **WARNING** (Orange background, black text)
- 6. **WARNING** (Orange background, black text)
- 7. **WARNING** (Orange background, black text)
- 8. **WARNING** (Orange background, black text)
- 9. **WARNING** (Orange background, black text)
- 10. **WARNING** (Orange background, black text)
- 11. **WARNING** (Orange background, black text)
- 12. **WARNING** (Orange background, black text)
- 13. **WARNING** (Orange background, black text)
- 14. **WARNING** (Orange background, black text)
- 15. **CAUTION** (Yellow background, black text)
- 16. **CAUTION** (Yellow background, black text)
- 17. **NOTICE** (Blue background, white text)
- 18. **NOTICE** (Blue background, white text)

The instructions on the right are as follows:

- Read and follow the operating instructions before use.
- To be installed only by those trained and knowledgeable in electrical and mechanical equipment installation.
- To be operated only by those trained and knowledgeable in the intended use of the monitor and all operating controls.
- To be maintained only by those trained and knowledgeable in the maintenance and repair of the monitor and all operating controls.
- In consideration of the approvals granted by Intertek, no substitution of components is authorized without their final approval.
- Aim the unit in a safe direction before pumping water through it. (i.e. Away from power lines).
- Do not use the electric controls when the hand wheels are being used or are in position for use.
- Keep all personnel out of the Danger Zone, in front of the outlet of the monitor when the water source is attached. Dangerous flow velocities can cause serious injury.
- Sensors and/or Programmable Logic Controllers, if incorporated in the system, may cause the unit to operate without a voluntary action.
- The Monitor Interface Control Panel (MICP™) is not for use in locations more restrictive than Ex II 3G Ex ec IIB+H2 T5 Gc (-40° C ≤ Ta ≤ 60° C) Zone 2, Zone 1 or NEC Class I, Div. 2, Groups B C & D.
- To avoid fire hazard, use only the fuse type and rating specified in this manual.
- Disconnect power and disable water flow, if applicable, before maintenance.
- Before opening the enclosure door or performing any service, turn off power at the mains disconnect feeding power to the Monitor Interface Control Panel (MICP™) to eliminate any possibility of shock while servicing in the enclosure. Follow all local lock-out, tag-out procedures.
- Class 1 equipment - This unit must be connected to Earth.
- The monitor contains moving parts. Keep hand, finger, and objects away from pinch points.
- Ensure that the nozzle knurled manual-locking handle is not tightened during electric operation.
- Ensure that the MICP enclosure door is always kept closed and securely latched to eliminate any water and dust intrusion.
- Replace the identification tags if they should become worn or damaged.

7.0 Illustrations

Illustration 5 - Instruction Pages (Cont.)

C. About this manual

This manual describes the Style 3688 Conquest G2™ Monitor Interface Control Panel (MICP™) for use with Style 3688 Conquest G2™ Industrial Monitor and Style 5188/5189 Conquest G2™ Nozzle. The Conquest G2™ Industrial Monitor system is a fixed site, electrically operated, gas mitigation and/or fire suppression device designed to flow water up to 2000 GPM at a pressure of up to 200 PSI monitor inlet pressure. Horizontal and vertical movement are accomplished via DC gear motor assemblies controlled by a proprietary motor drive board which interface to a three-axis proprietary CAN Interface Board. Reference the customer order and packing slip to determine equipment supplied.

WARNING

- Read and follow the operating instructions before use.

WARNING

- To be installed only by those trained and knowledgeable in electrical and mechanical equipment installation.

WARNING

- To be operated only by those trained and knowledgeable in the intended use of the monitor and all operating controls.

WARNING

- To be maintained only by those trained and knowledgeable in the maintenance and repair of the monitor and all operating controls.

Each section provides detailed information necessary for the installation and operation of the Conquest G2™ Monitor Interface Control Panel (MICP™). To ensure proper and safe installation, pay special attention to all warnings and important notes that appear in this manual. All installation, operation, and maintenance on the Conquest G2™ Monitor Interface Control Panel (MICP™) must be performed by qualified personnel.

	Qualified personnel are described as follows: Installation: Trained and knowledgeable in electrical and mechanical equipment installation. Operation: Trained and knowledgeable for the intended use of the monitor and all operating controls. Maintenance: Trained and knowledgeable in electrical and mechanical equipment maintenance and repair.
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Each Conquest G2™ Industrial Monitor System is comprised of three (3) main components:

- Monitor Assembly (Style 3688)
- Nozzle Assembly (Style 5188 or 5189)
- Monitor Interface Control Panel (MICP™) (Style 3688)

All Style/Serial numbers for Conquest G2™ systems begin with 3688 and is followed by 4 additional digits. Ex: 36880100. The last 4 digits are used to associate the system with a specific customer order and to distinguish it from all other systems.

7.0 Illustrations

Illustration 6 - Instruction Pages (Cont.)



IV. Technical Specifications

A. Monitor Interface Control Panel (MICP™):

Monitor Interface Control Panel (MICP™) Overview

- **Uses:**
 - Fire Suppression
 - Gas Mitigation
 - LNG Tank Cooling
 - Waste to Heat Transfer
 - Washdown applications
- **Construction:** 316L Stainless Steel increased safety enclosure
- **Compliance:** ATEX, IECEx, Nema 4x, IP66 rated, Class I, Div. II Hazardous Area locations
- **Enclosure Sizes:**
 - **Fire Suppression** 24"H x 24" W x 8" D
 - **Gas Mitigation** 30"H x 24" W x 8" D
- **Input Power:**
 - 120Vac - 50/60Hz
 - 220Vac - 50/60Hz
- **Power Consumption:**
 - 2A Max @ 120VAC
 - 1A Max @ 220VAC
- **Temperature Range:**
 - -40°F to +140°F
 - -40°C to +60°C
- **Internal Control Power:**
 - 24VDC - 20A Max
- **Monitor Control:**
 - Proprietary CAN Interface Board
- **Environmental Equipment Specification Ratings:**

Description	Rating
Environment	Indoor or outdoor
Altitude	≤ 5000 m
Temperature	-40 °C ... 60 °C
Relative Humidity	≤ 100 % (at 25 °C, non-condensing)
MICP Mains supply voltage fluctuation	100 V AC ... 240 V AC -15 % ... +10 %
Overvoltage Category	II (≤ 5000 m)
Pollution Degree	2



Gas Mitigation MICP™

7.0 Illustrations

Illustration 7 - Instruction Pages (Cont.)

Monitor Interface Control Panel (MICP™) Operator Devices

- Standard Device Operators on ALL versions:
 - Power Off/On (2-position maintained switch)
 - Power On (indicator light)
- Optional Device Operators available:
 - Local/Remote Mode (3-position spring return to center switch)
 - Park/Learn (3-position spring return to center switch)
 - Up/Down (3-position spring return to center switch)
 - Left/Right (3-position spring return to center switch)
 - Stream/Fog (3-position spring return to center switch)
 - Oscillate Rotation Axis (3-position spring return to center switch)
 - Oscillate Elevation Axis (3-position spring return to center switch)
 - Monitor Oscillating (Indicator light)
 - Water Valve Open/Close (3-position spring return to center switch)
 - Water Valve Open (Indicator light) *
 - Water Valve Closed (Indicator light) *
 - Aux Valve Open/Close (3-position spring return to center switch)
 - Aux Valve Open (Indicator light) *
 - Aux Valve Closed (Indicator light) *

* Activated by valve limit switches or downstream press switches



Gas Mitigation MICP™

Monitor Interface Control Panel (MICP™) Sub Panel

- Fire Suppression panel components supplied on ALL units:
 - Proprietary CAN Interface Board
 - Mains Power fuses
 - 24VDC, 20A Power Supply.
 - Spring loaded field connection terminal blocks.
- Optional Internal components:
 - Red Lion Media Converter (2) Copper (1) Fiber-Optic
- Gas Mitigation panel components supplied on ALL units.
 - Proprietary CAN Interface Board
 - Mains Power fuses
 - 24VDC, 20A Power Supply.
 - Spring loaded field connection terminal blocks.
- Optional Internal components:
 - Redundant 24VDC Power Supply
 - Fiber optic media converter for Modbus TCP/IP Ethernet connection
 - Red Lion Media Converter (2) Copper, (1) Fiber-Optic
 - Red Lion DLR Media Converter – (4) Copper, (2) Fiber-Optic
 - Rockwell ETAP Media Converter – (1) Copper, (2) Fiber-Optic
 - Electro-mechanical Relays.
 - Fused terminal blocks for field interface.



Gas Mitigation MICP™ Sub Panel

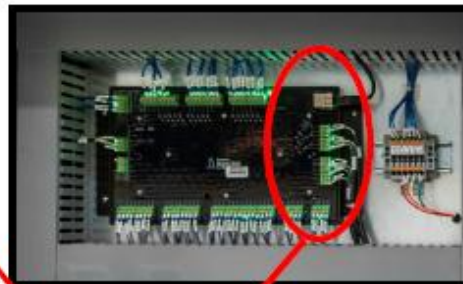
7.0 Illustrations

Illustration 8 - Instruction Pages (Cont.)

Monitor Interface Control Panel (MICP™) Control

- **Monitor Interface Control Communication protocol.**
 - Ethernet port utilizing Modbus TCP/IP Protocol for DCS, PLC or HMI interface.
- **Isolated 4-20mA Monitor Analog Control Interface:**
 - (3) 4-20mA Isolated Analog Outputs
Monitor Feedback Position for Elevation, Rotation, and Nozzle motors. *
 - (3) 4-20mA Isolated Analog Inputs
Position Setpoint Control for Elevation, Rotation, and Nozzle motors.

* Feedback Position is updated continuously regardless of MICP™ operating mode.



7.0 Illustrations

Illustration 9 - Instruction Pages (Cont.)

E. External Equipment Protection – Mains Supply:

	All power wiring to the Monitor Interface Control Panel must be installed in accordance with all local and national electrical codes.
	Ensure that all appropriate penetration practices are followed to maintain the required rating for the hazardous locations per Section III Compliance.
	It is the responsibility of the installer to ensure that all applicable electrical codes have been met and all hazardous locations per Section III Compliance requirements are met.

The mains supply to the MICP™ MUST be powered through a separate customer supplied circuit breaker. The mains protective device MUST be equipped with lockout/tagout capability to ensure safe maintenance practices. Installation of mains supply must be performed by qualified personnel only.

F. Equipment Protection – Internal fuse replacement:

	Disconnect and lock out Mains Power before working on any electrical components or replacing MICP™ internal fuses.
	Risk of fire or personal injury! Replace internal fuses with the same type and rating.

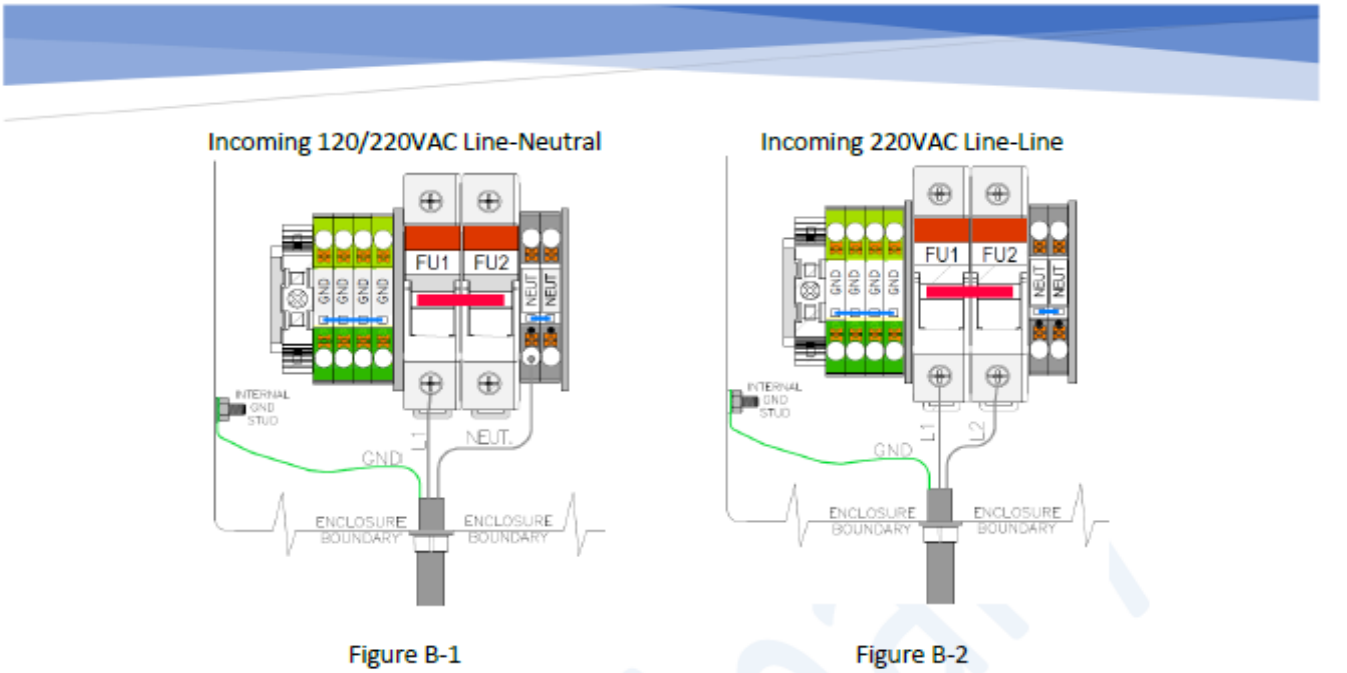
Fuse(s) for the MICP™ are located inside on the lower left bottom din rail. All fuses are 600VAC Class CC time delay fuses. To avoid a potential fire or personal injury, replace the internal fuses with the same type and rating listed in Table F-1. Disconnect MICP™ power before replacing internal fuses.

Mains Voltage	Fuse I.D.	Fuse Holder Location	Fuse Rating	Mfg.	Catalog #
120VAC	F1	Mounted on DIN Rail	2A	Bussmann/ Mersen	FNQ-R-2 ATQR-R-2
220VAC	F1	Mounted on DIN Rail	1A	Bussmann/ Mersen	FNQ-R-1 ATQR-R-1
	F2	Mounted on DIN Rail	1A	Bussmann/ Mersen	FNQ-R-1 ATQR-R-1

Fuse Replacement – Table F-1

7.0 Illustrations

Illustration 12 - Instruction Pages (Cont.)



Main Power - Panel	Panel Connections	Fuse	Description	Part No.
120-VAC 50/60Hz Single Phase	Figure B-1 L1, Neut, & Gnd #14ga.Min-#6ga.Max	F1	Class CC, Time Delay, 600VAC, 2 Amp	FNQ-R-2/ ATQR-R-2
220-VAC 50/60Hz Single Phase Line-Neutral	Figure B-1 L1, Neut, & Gnd #14ga.Min-#6ga.Max	F1	Class CC, Time Delay, 600VAC, 1 Amp	FNQ-R-1/ ATQR-R-1
220-VAC 50/60Hz Single Phase Line - Line	Figure B-2 L1, L2, & Gnd #14ga.Min-#6ga.Max	F1	Class CC, Time Delay, 600VAC, 1 Amp	FNQ-R-1/ ATQR-R-1
		F2	Class CC, Time Delay, 600VAC, 1 Amp	FNQ-R-1/ ATQR-R-1

Table B-1 – Connection & Fuse Information

C. Grounding and Bonding

	The MICP must be connected to Earth ground to ensure safe operation and to avoid equipment damage!
	Do not remove the ground connection! If the ground connection is removed, certain fault conditions in the system can result in full line voltage between chassis and earth ground. Severe injury or death can result if the chassis and earth ground are touched simultaneously.
	An internal chassis ground stud has been provided at the bottom of the enclosure for Mains Power Connection on the inside of the MICP enclosure. An external ground stud is also available on the outside of the enclosure. The ground stud is identified by a ground symbol and must be connected to Earth. The ground conductor must be connected first and with a separate nut if the connection point is used for other bonding purposes.

8.0 Test Summary				
Evaluation Period	9/27/2024 to 9/30/2024			Project No. G105388636
Sample Rec. Date	1-Apr-2024	Condition	Production	Sample ID. CRT2404011529-001
Test Location	Intertek, 3933 US Route 11, Cortland, NY 13045 USA			
Test Procedure	Test Data Acceptance - Level 3			
Determination of the result includes consideration of measurement uncertainty from the test equipment and methods. The product was tested as indicated below with results in conformance to the relevant test criteria.				
The following tests were performed:				
Test Description	UL/CSA 61010-1 Clause:	UL/CSA 60079-0 Clause:	UL/CSA 60079-31 Clause:	UL/CSA 60079-7 Clause:
Input Test	5.1.3c	--	--	--
Rigidity Test (Static)	8.2.1	--	--	--
Rigidity Test (Dynamic)	8.2.2	--	--	--
Temperature Measurement	10.4	26.5.1	--	--

8.1 Signatures			
A representative sample of the product covered by this report has been evaluated and found to comply with the applicable requirements of the standards indicated in Section 1.0.			
Completed by:	William Beveridge	Reviewed by:	Kevin Wolf / Scott Peterson
Title:	Engineer	Title:	Reviewer / Reviewer
Signature:		Signature:	 

9.0 Correlation Page For Multiple Listings

The following products, which are identical to those identified in this report except for model number and Listee name, are authorized to bear the ETL label under provisions of the Intertek Multiple Listing Program.

BASIC LISTEE	Akron Brass Company
Address	343 Venture Blvd. PO Box 86 Wooster, OH 44691-4681
Country	USA
Product	Fire Monitor Control Panel for use in:

MULTIPLE LISTEE 1	None
Address	
Country	
Brand Name	
ASSOCIATED MANUFACTURER	
Address	
Country	
MULTIPLE LISTEE 1 MODELS	BASIC LISTEE MODELS

MULTIPLE LISTEE 2	None
Address	
Country	
Brand Name	
ASSOCIATED MANUFACTURER	
Address	
Country	
MULTIPLE LISTEE 2 MODELS	BASIC LISTEE MODELS

MULTIPLE LISTEE 3	None
Address	
Country	
Brand Name	
ASSOCIATED MANUFACTURER	
Address	
Country	
MULTIPLE LISTEE 3 MODELS	BASIC LISTEE MODELS

10.0 General Information

The Applicant and Manufacturer have agreed to produce, test and label ETL Listed products in accordance with the requirements of this Report. The Manufacturer has also agreed to notify Intertek and to request authorization prior to using alternate parts, components or materials.

COMPONENTS

Components used shall be those itemized in this Intertek report covering the product, including any amendments and/or revisions.

LISTING MARK

The ETL Listing mark applied to the products shall either be separable in form, such as labels purchased from Intertek, or on a product nameplate or other media only as specifically authorized by Intertek. Use of the mark is subject to the control of Intertek.

The mark must include the following four items:

- 1) applicable country identifiers "US" and/or "C" or "US", "C" and "EU"
- 2) the word "Listed" or "Classified" or "Recognized Component" (whichever is appropriate)
- 3) a control number issued by Intertek
- 4) a product descriptor that identifies the standards used for certification. Example:

For US standards, the words, "Conforms to" shall appear with the standard number along with the word, "Standard" or "Std." Example: "Conforms to ANSI/UL Std. XX."

For Canadian standards, the words "Certified to CAN/CSA Standard CXX No. XX." shall be used, or abbreviated, "Cert. to CAN/CSA Std. CXX No. XX."

Can be used together when both standards are used.

If all standards on the ATM have the same standard title, the shared title or its abbreviation may be used in place of the examples above. Example: "Medical Electrical Equipment" or "MEE"; "Information Technology Equipment" or "ITE"; "Audio/Video Information And Communication Technology Equipment" or "A/V ICTE".

Note: A facsimile must be submitted to Intertek, Attn: Follow-up Services for approval prior to use.

The facsimile need not have a control number. A control number will be issued **after signed Certification Agreements** have been received by the Follow-up Services office, approval of the facsimile of your proposed Listing Mark, satisfactory completion of the Listing Report, and scheduling of a factory assessment in your facility.

MANUFACTURING AND PRODUCTION TESTS

Manufacturing and Production Tests shall be performed as required in this Report.

FOLLOW-UP SERVICE

Periodic unannounced audits of the manufacturing facility (and any locations authorized to apply the mark) shall be scheduled by Intertek. An audit report shall be issued after each visit. Special attention will be given to the following:

1. Conformance of the manufactured product to the descriptions in this Report.
2. Conformance of the use of the ETL mark with the requirements of this Report and the Certification Agreement.
3. Manufacturing changes.
4. Performance of specified Manufacturing and Production Tests.

In the event that the Intertek representative identifies non-conformance(s) to any provision of this Report, the Applicant shall take one or more of the following actions:

1. Correct the non-conformance.
2. Remove the ETL Mark from non-conforming product.
3. Contact the issuing product safety evaluation center for instructions.

10.1 Evaluation of Unlisted Components

Because Unlisted Components are uncontrolled, and they do not fall under a third party follow up program, Intertek may require these components to be tested and/or evaluated at least once annually, more often for certain components, as part of the independent certification process. The Unlisted Components in Section 5.0 require testing and/or evaluation as indicated.

The Applicant will be notified, in writing, via the applicable contact methods, as defined in Section 1.0, when these components must be selected and sent to Component Evaluation Center (CEC) for re-evaluation.

Due to particular testing requirements, some components may be requested to be shipped to specific labs. Thus, specific shipment destination(s) for each sample will be provided in the written notification.

Managing CEC Location:
Intertek Testing Services NA Inc.
ETL Component Evaluation Center
1717 Arlingate Ln.
Columbus, Ohio 43228 USA
Attn: CEC Safety

Sample Disposition: Due to the destructive nature of the testing, all samples will be discarded at the conclusion of testing unless, the manufacturer specifically requests the return of the samples. The request for return must accompany the initial component shipment.

11.0 Manufacturing and Production Tests

The manufacturer agrees to conduct the following Manufacturing and Production Tests as specified:

Required Tests

Dielectric Voltage Withstand Test,
Grounding Continuity Test

11.1 Dielectric Voltage Withstand Test

Method

One hundred percent of production of the products covered by this Report shall be subjected to a routine production line dielectric withstand test.

The test shall be conducted on products, which are fully assembled. Prior to applying the test potential, all switches, contactors, relays, etc., should be closed so that all primary circuits are energized by the test potential. If all primary circuits cannot be tested at one time, then separate applications of the test potential shall be made.

The test voltage specified below shall be applied between primary circuits and accessible dead-metal parts. The test voltage may be gradually increased to the specified value but must be maintained at the specified value for one second or one minute as required.

Test Equipment

The test equipment shall incorporate a transformer with an essentially sinusoidal output, a means to indicate the applied test potential, and an audible and/or visual indicator of dielectric breakdown.

The test equipment shall incorporate a voltmeter in the output circuit to indicate directly the applied test potential if the rated output of the test equipment is less than 500VA.

If the rated output of the test equipment is 500VA or more, the applied test potential may be indicated by either:

- 1 - a voltmeter in the primary circuit;
- 2 - a selector switch marked to indicate the test potential; or
- 3 - a marking in a readily visible location to indicate the test potential for test equipment having a single test potential output.

In cases 2 and 3, the test equipment shall include a lamp or other visual means to indicate that the test potential is present at the test equipment output. All test equipment shall be maintained in current calibration.

Products Requiring Dielectric Voltage Withstand Test:

<u>Product</u>	<u>Test Voltage</u>	<u>Test Time</u>
All products covered by this Report.	1500V	60 s
	or	
	1800V	0.1 s

11.2 Grounding Continuity Test

Method

Each product listed below shall be subjected to a test to determine that there is continuity between accessible dead-metal parts of the product and the grounding pin or blade of the attachment plug.

If all accessible dead metal is connected, only a single test need be performed. A visual or audible device (ohmmeter, buzzer, etc.) may be used to indicate grounding continuity.

Products Requiring Grounding Continuity Test:

All products covered by this Report.

12.0 Revision Summary

The following changes are in compliance with the declaration of Section 8.1:

[illegible]