MEPNN Supplier Scouting Opportunity Synopsis

Section 1: General Information

Scouting Number	2026-649
Item to be Scouted	BABA: Circuit Interrupters / Breakers
Days to be scouted	14
Response Due By	12/02/2026
Description	120/208V Arc-Fault Circuit Interrupter (AFCI) and Ground-Fault Circuit Interrupter (GFCI) circuit breakers are electrical protection devices designed for installation in residential and multifamily dwelling unit load centers and

Section 2: Technical Information

Type of supplier being sought	Manufacturer
Reason	BABA
Describe the manufacturing processes (elaborate to provide as much detail as possible)	hazardous electrical conditions. AFCI breakers are designed to detect dangerous electrical arcing conditions that may result from damaged wiring, loose connections, or deteriorating electrical components, helping reduce the risk of electrical fires. GFCI breakers monitor electrical current imbalances between the ungrounded and grounded conductors and interrupt power when ground-fault conditions are detected, helping protect occupants from electrical shock. The breakers are typically installed directly within the dwelling unit load center and are available in various amperage ratings and configurations to accommodate individual branch-circuit requirements. Depending on the application, breakers may provide AFCI protection, GFCI protection, or combination AFCI/GFCI protection within a single device. They are designed to operate with compatible panelboards and electrical distribution systems rated for the specified voltage and interrupting capacity. These products are essential components of the electrical distribution system in multifamily residential developments, providing occupant safety, equipment protection, and compliance with applicable electrical codes and listing requirements. Minnesota

2. Component Fabrication: Metal components are stamped, cut, formed, machined, and plated to produce conductive terminals, contact assemblies, springs, and internal electrical connections. Plastic components are typically manufactured through injection molding to create insulated housings and structural components.

3. Electronic Component Assembly: Circuit boards and electronic sensing components are assembled using automated surface-mount technology (SMT), soldering, and precision assembly processes. AFCI breakers incorporate electronic circuitry designed to identify hazardous electrical arcing patterns, while GFCI breakers incorporate current-sensing components that detect ground-fault conditions.

4. Breaker Mechanism Assembly: Internal switching mechanisms, trip assemblies, contacts, thermal-magnetic protection components, and electronic protection systems are integrated into the breaker housing. These components work together to interrupt electrical current when overloads, short circuits, arc faults, or ground faults are detected.

5. Final Assembly: The assembled components are secured within the molded insulating enclosure. Electrical terminals, connection points, operating handles, trip indicators, and panelboard mounting components are installed.

6. Quality Control and Testing: Each breaker undergoes electrical performance testing, continuity checks, insulation resistance testing, dielectric testing, and functional trip testing. AFCI and GFCI models are additionally tested to verify their ability to detect and interrupt the specific hazardous conditions they are designed to protect against.

7. Certification and Packaging: Finished products are inspected for compliance with applicable UL standards, including UL 489, UL 1699, and UL 943, as applicable to the product design. Certified products are labeled, packaged, and prepared for distribution to electrical wholesalers, contractors, and construction projects.

Manufacturing typically requires: Metal stamping equipment, injection molding machines, automated circuit board assembly equipment, soldering systems, precision assembly machinery, electrical testing equipment, calibration systems, and quality-control inspection stations.

Provide dimensions / size / tolerances / performance specifications for the item	1. Dimensions and Physical Characteristics Typical specifications include: - Voltage Rating: 120/208V AC, depending on circuit configuration and breaker application. - Pole Configurations: Single-pole and two-pole configurations. - Amperage Ratings: Commonly 15A, 20A, 30A, and higher ratings depending on application. - Physical Size: Generally designed for standard residential load center mounting, with single-pole breakers occupying one panel space and two-pole breakers occupying two spaces. - Housing Material: Flame-resistant, molded insulating thermoplastic. - Connection Type: Manufacturer-specific plug-in or bolt-on connections compatible with the designated load center. - Mounting: Designed for direct installation into compatible panelboards and load centers. 2. Electrical and Performance Specifications Specification Typical requirements Nominal voltage 120/208V AC system, application-dependent Frequency 60 Hz Amperage Typically 15A–60A, depending on circuit Interrupting capacity Typically 10 kAIC minimum; higher ratings available AFCI protection Detection of series and parallel arc faults GFCI protection Personnel protection, typically 5 mA trip threshold Overcurrent protection Thermal-magnetic or electronic trip protection Short-circuit protection Automatic interruption during short-circuit conditions Ground-fault response Automatic interruption upon detecting qualifying current leakage Reset capability Manual reset following trip condition Operating mechanism Thermal-magnetic and/or electronic sensing and switching
List required materials needed to make the product, including materials of product components	1. Raw Material Processing: Copper, brass, steel, thermoplastics, and electronic-grade materials are sourced and processed to manufacture the breaker housing, electrical contacts, terminals, internal conductors, and protective components.
Are there applicable certification requirements?	Yes
Certification(s) required	UL
Are there applicable regulations?	No
Are there any other stndards, requirements, etc.?	Yes
Details	NEC 2023 Article 210.12 – Arc-Fault Circuit-Interrupter (AFCI) Protection. NEC 2023 Article 210.8 – Ground-Fault Circuit-Interrupter (GFCI) Protection. ANSI/UL 489 Establishes requirements for molded-case circuit breakers, including construction, electrical performance, overload protection, short-circuit interruption, and testing. ANSI/UL 1699 Establishes safety and performance requirements for Arc-Fault Circuit Interrupters (AFCIs), including detection and interruption of hazardous electrical arcing conditions. ANSI/UL 943 Establishes requirements for Ground-Fault Circuit Interrupters (GFCIs), including ground-fault detection, trip performance, electrical safety, and testing.
Additional Technical Comments	

Section 4: Business Information

Estimated potential business volume	AFCI Breakers: (5) per unit for 28 unit load centers. Total: 140 GFCI Breakers: (1) per unit for 28 unit load centers. Total: 28

Estimated target price / unit cost information (if unavailable explain)	Pricing cannot be provided at this time due to the ongoing design finalization process. Additionally, costs vary significantly between suppliers, and there is currently uncertainty regarding potential price increases associated with BABA-compliant versus non-BABA-compliant products. Shipping expenses and labor costs may also vary depending on product availability, supplier location, and installation requirements. As a result, providing an accurate cost estimate at this stage would be premature.
When is it needed by?	Immediate
Describe packaging requirements	Palletized
Where will this item be shipped?	Minneapolis, MN

Additional Comments

Is there other information you would like to include?	Funding: MHFA; Minnesota Housing Finance Agency POC: Nick Hoelscher; nick.h@noorcompanies.com