AREA PROTECTION PANEL

1. GENERAL
	1. Quality assurance
		1. Electrical Components, Devices, and Accessories: Listed and labeled as UL 508.
		2. Comply with UL 508.
	2. Submittals
		1. Product Data: Include ratings and dimensioned plans, sections, and elevations showing minimum clearances, conductor entry provisions, gutter space, installed features and devices, and material lists for each switch specified.
		2. Drawings: Outline, Schematic and Part Layout drawings shall be provided for each switch. Drawings shall differentiate between manufacturer-installed and field installed wiring. Show both power and control wiring.
		3. Maintenance Data: For each type of product, include maintenance manuals as specified in Division One. Include all features and operating sequences, both automatic and manual. List all factory settings of relays and provide relay setting and calibration instructions, including software, where applicable to be supplied by others.
	3. GUARANTEE/WARRANTY
		1. The equipment installed under this contract shall be left in proper working order.
		2. New materials and equipment shall be guaranteed against defects in composition, design, or workmanship. Guarantee certificates shall be furnished.
2. PRODUCT
	1. Area Protection Panel
		1. Manufacturers: Subject to compliance with requirements, provide products by the following:
			1. Lake Shore Electric, LLC.: Area Protection Panel
			2. Lake Shore Electric, LLC. Part No.: [[Insert Part Number](https://lake-shore-electric.com/wp-content/uploads/Area-Protection-Panel_1.pdf)]
			3. Lake Shore Electric, LLC, https://wwww.lake-shore-electric.com/ and/or sales@lake-shore-electric.com
3. GENERAL REQUIREMENTS
	1. Entire package must be listed to or UL 508 Standards. Manufacture shall have a minimum of 10 years’ experience building Area Protection Panels.
	2. Enclosures:
		1. NEMA 1 Indoor Rating, 14GA Steel Enclosure.
			1. Key locking front door.
			2. Construction of the enclosure shall be welded.
		2. Finishes:
			1. Paint after fabrication. Powder coated ANSI 61 Gray, Textured.
	3. Electrical Rating:
		1. Voltage Rating: Rated up to 600Vac
		2. Service Voltage: [1Ǿ 120 or 240VAC or 3Ǿ 208, 240 or 480VAC]
		3. Locations: Monitoring capability of [Choose 1 to 24 Points] points.
	4. Relays:
		1. Relays to be solid state construction
		2. Relays used in three phase applications to indicate phase rotation.
		3. Visible indication of failed circuit to be provided directly on the sending relay.
	5. Additional accessories shall be included in submittal drawings as follows:
		1. Common Failure Indicating Light
		2. Area Failure Indicating Lights
		3. Multiple voltages to be monitored in a single panel.
	6. Name Plates:
		1. Engraved identification nameplates for each monitored point located on door.
			1. List of Name Plate Descriptions
				1. [ex. HVAC]
				2. [ex. Elevator]
	7. Sequence of Operation
		1. Area Protection Panels are to be designed to monitor multiple points in an electrical system for proper normal source voltages.
		2. Area Protection Panels to come with an output contact which changes state in the event of one, or more, areas being out of their correct voltage ranges. Each area to be monitored with a dedicated Phase Failure Relay (PFR) to ensure it is within the proper voltage operating range.
		3. When a failure of any single area occurs, the Area Protection Panel Output contact will change state to give the appropriate equipment a signal to activate. As normal power returns, the APP’s output contact changes back to its normal state to signal the appropriate equipment to deactivate.
	8. EXECUTION
		1. EXAMINATION
			1. Examine elements and surfaces to receive Area Protection Panel for compliance with installation tolerances and other conditions affecting performance of the Work.
		2. INSTALLATION
			1. Surface Mounted:
		3. FIELD QUALITY CONTROL
			1. Third Party Tests and Inspections to include the following:
			2. Perform each visual and mechanical inspection and electrical test stated in NETA Acceptance Testing Specification. Certify compliance with test parameters.
			3. Prepare test and inspection reports, including a certified report that identifies Area Protection Panel and that describes scanning results. Include notation of deficiencies detected, remedial action taken, and observations after remedial action.

END OF SECTION: AREA PROTECTION PANEL